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ABSTRACT

The 1987-88 Schools and Staffing Survey (SASS) and the 1988-89 Teacher Followup Survey contain data that can be used to examine issues related to the need for teachers, sources of teacher supply, teacher turnover, teacher attrition, and teacher shortages. This report describes patterns in the sources of supply and the demand for teachers in terms of indicators of shortage and surplus. All but two tables include national estimates for all teachers and for public and private school teachers separately. In 1987-88, approximately 2.6 million teachers were employed in the nation's schools, 2.3 million of them in public schools. In 1987-88, about 63,000 teachers were newly hired, and most were just out of college. In 1987-88, approximately 11 percent of open teaching positions were not filled. Reasons why teachers left the workforce were also studied. Seventeen tables present survey findings. Appendix A presents 17 tables of standard errors, and Appendix B contains technical notes. (SLD)

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Schools and Staffing Survey
Teacher Followup Survey

Selected Tables on Teacher Supply and Demand: 1987–88 and 1988–89

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Schools and Staffing Survey
Teacher Followup Survey

Selected Tables on Teacher Supply and Demand: 1987–88 and 1988–89

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Highlights

- During the 1987–88 school year, approximately 2.6 million teachers were employed in the nation's schools, 2.3 million of them in public schools and 300,000 in private schools (table 1).

- Some 88 percent had taught in the same school the year before, 6 percent had taught in another school, 3 percent were first-time teachers, and 3 percent were former teachers returning to the classroom (table 1).

- There were 63,000 newly hired, first-time teachers in 1987–88 (table 2). The majority (61 percent) had been attending college the year before. Another 20 percent had been working in nonteaching jobs, 4 percent had been homemaking, and 1 percent had been unemployed. The rest (13 percent) had been in the military, or their status was unknown. Among the newly hired, first-time teachers in private schools who were between 36 and 50 years old, 36 percent had been homemaking the previous year.

- About 65,000 members of the teaching force were newly hired re-entrants (table 3). These were more likely than newly hired, first-time teachers to have been homemakers the previous year (26 percent) or to have been working in nonteaching jobs (31 percent) and less likely to have been enrolled in college (12 percent).

- Newly hired re-entrants were about as likely as continuing teachers to have earned a master's degree in education as their highest degree (39 percent of public school teachers and 19 percent of private school teachers) (table 4). In contrast, about 8 percent of newly hired, first-time teachers had master's degrees in education as their highest degree earned.

- There were approximately 260,000 open teaching positions in 1987–88 (200,000 of which were in public schools and 60,000 in private schools); 11 percent were not filled (table 6).

- Between 1987–88 and 1988–89, 6 percent of all teachers left classroom teaching (5 percent of public school teachers and 11 percent of private school teachers) (table 8). Eight percent of those who continued teaching moved to a new school.

- Almost all newly hired teachers in public districts had standard certification (93 percent); in private schools, 76 percent had standard certification (table 9).

- Attrition rates varied with age, with younger and older teachers leaving most frequently. Leaving teaching in 1987–88 were 8 percent of teachers less than 36 years old, 3 percent of those between 36 and 50 years, and 11 percent of those 51 years or more (table 12). Attrition was higher in private schools than in public schools among teachers less than 36 years old (14 percent compared with 7 percent) and among teachers between 36 and 50 years (10 percent compared with 3 percent).

- Of the public school teachers who left, 33 percent left for career reasons, 28 percent left for retirement, 19 percent left for child rearing, and 15 percent left for family or health reasons (table 14). The remaining 5 percent left involuntarily. Private school teachers were more likely than public school teachers to leave for family or health reasons (30 percent) and less likely to leave for retirement (5 percent).

- Forty-two percent of the teachers who left voluntarily between 1987–88 and 1988–89 for reasons other than retirement planned to return to teaching, 62 percent of them by the following year and another 26 percent within 5 years (table 16).

- Of the voluntary, nonretiring leavers from both public and private schools in 1987–88, 36 percent were homemaking in 1988–89, and 8 percent were attending college (table 17). Twenty percent of the former public school teachers and 9 percent of former private school teachers were employed in nonteaching jobs in education.

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Introduction

The 1987–88 Schools and Staffing Survey (SASS) and the 1988–89 Teacher Followup Survey (TFS) contain a wealth of data that can be used to examine issues related to the need for teachers, sources of supply, turnover and attrition, and teacher shortages. It is possible not only to develop estimates of the numbers of teachers, where they come from, and where they go, but also to examine in some detail the factors related to the movement of teachers in and out of the teaching work force. For example, it is possible to test hypotheses about the relationship between teacher attrition and teachers' demographic characteristics, professional qualifications, and working conditions.

This report is not intended to provide a comprehensive treatment of teacher supply and demand. Rather, it is meant to describe patterns in the sources of supply, the demand for teachers in terms of various indicators of shortage and surplus, and teacher attrition, with a focus on the latter. All but two tables include national estimates for all teachers and for public and private school teachers separately. (The remaining two tables show public sector data by state.) Within the public and private sectors, data are reported for selected teacher characteristics, such as sex, race–ethnicity, age, experience, teaching level and field, and for selected school characteristics, such as region, community type, level, percentage of students eligible for free lunches, and percent minority enrollment. The teacher data presented in tables 7 and 9 represent full-time equivalent teachers; in all other tables the data represent teacher headcounts, including both full- and part-time teachers. Appendix A contains tables with the standard errors for each of the estimates.

Relationships suggested in these tables must be interpreted with caution because the link between teacher attrition and these school and teacher characteristics is complex and is best

studied using multivariate analytic techniques. To meet this need, a forthcoming Research and Development Report, *Modeling Teacher Supply and Demand, With Commentary*, scheduled for publication in summer 1993, develops and tests a series of multivariate models to identify the factors most closely related to staying in and leaving teaching.

The 1987–88 SASS consisted of separate surveys administered simultaneously by mail to linked samples of teachers, administrators, schools, and (in the public sector) districts. The 1988–89 TFS collected data from all teachers in the SASS sample who left teaching and from a sample of teachers who continued teaching. The survey methodology is described in the Technical Notes (appendix B).

Table 1—Number of teachers and percentage distribution of teachers by teacher status, by sector and selected school and teacher characteristics: 1987–88

	Number of teachers	Teacher status (percent)			
		Stayers	Movers	First-time teachers	Re-entrants
Total	2,334,499*	88.3	6.2	2.7	2.8
Public	2,089,158*	89.1	6.1	2.3	2.5
Region					
Northeast	440,932	90.4	5.3	1.7	2.6
Midwest	538,119	91.1	4.9	1.9	2.0
South	754,906	87.5	7.1	2.6	2.8
West	355,200	87.8	6.5	3.2	2.5
Teaching level and field					
Elementary	930,758	88.8	6.5	2.4	2.3
Secondary					
Math/computer science	142,767	90.2	4.7	3.0	2.0
Science	115,330	90.7	4.4	2.7	2.2
Other	704,343	91.0	4.7	1.9	2.3
Special education	195,960	82.1	10.7	2.7	4.5
Private	245,342*	81.6	7.5	5.7	5.1
Region					
Northeast	71,432	80.9	7.3	6.8	5.0
Midwest	66,811	83.2	6.4	6.3	4.1
South	70,916	82.5	7.3	4.1	6.1
West	36,183	78.5	10.3	5.7	5.5
Teaching level and field					
Elementary	128,925	80.9	8.1	5.7	5.3
Secondary					
Math/computer science	16,985	80.8	6.9	7.1	5.2
Science	16,042	82.3	6.8	7.5	3.4
Other	77,160	83.5	7.0	4.6	4.9
Special education	6,229	74.7	5.2	11.0	9.1

*The total number of teachers and the numbers of public and private school teachers are less than numbers based on the Teacher Questionnaire published elsewhere (2,630,335; 2,323,204; and 307,131) because teachers missing data on teacher status due to item nonresponse were not included in this table.

NOTE: Details may not add to totals due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88 (Teacher Questionnaires).

Table 2—Number of newly hired, first-time teachers and percentage distribution of newly hired, first-time teachers by previous year's main activity, by sector and selected school and teacher characteristics: 1987–88

	Number of newly hired, first-time teachers*	Main activity during 1986–87 school year (percent)					
		Working/ not teaching	Attending college/ university	Home-making	Unemployed	Retired	Military/ unknown
Total	62,558	20.1	61.0	4.0	1.4	—	13.3
Public	48,546	17.7	62.9	3.6	1.6	—	14.2
Region							
Northeast	7,368	19.8	58.4	5.5	—	0.0	15.6
Midwest	10,308	18.1	63.5	—	—	0.0	16.6
South	19,584	14.7	68.2	5.0	1.4	—	10.5
West	11,287	21.1	55.9	2.2	3.3	0.0	17.5
Teaching level and field							
Elementary	22,400	14.0	62.1	4.9	1.0	0.0	18.0
Secondary							
Math/computer science	4,276	12.5	72.0	—	3.8	0.0	8.9
Science	3,147	23.6	65.1	—	—	0.0	9.9
Other	13,514	25.1	56.1	3.2	2.2	—	13.1
Special education	5,209	15.1	74.8	—	—	0.0	7.4
Sex							
Male	12,228	26.0	55.6	—	3.6	—	13.2
Female	36,161	15.0	65.2	4.4	0.9	0.0	14.5
Race–ethnicity							
Black, non-Hispanic	—	—	—	—	—	—	—
White, non-Hispanic	42,628	15.7	63.2	3.9	1.8	0.0	15.3
All others	2,547	30.9	64.2	0.0	0.0	0.0	4.8
Age							
Under 36 years	38,899	16.7	67.6	3.0	1.3	0.0	11.5
36–50 years	8,965	22.4	42.2	6.4	3.0	—	25.5
51 years or older	—	—	—	—	—	—	—
Private	14,012	28.5	54.7	5.5	0.8	—	10.4
Region							
Northeast	4,843	33.7	49.3	4.9	—	0.0	11.1
Midwest	4,204	22.5	59.8	7.2	0.0	0.0	10.6
South	2,908	31.7	48.6	7.5	—	—	11.0
West	2,057	24.2	65.9	—	—	0.0	7.5

Table 2—Number of newly hired, first-time teachers and percentage distribution of newly hired, first-time teachers by previous year's main activity, by sector and selected school and teacher characteristics: 1987–88—Continued

	Number of newly hired, first-time teachers*	Main activity during 1986–87 school year (percent)					
		Working/ not teaching	Attending college/ university	Home-making	Unemployed	Retired	Military/ unknown
Teaching level and field							
Elementary	7,337	24.7	56.2	8.0	—	0.0	9.9
Secondary							
Math/computer science	—	—	—	—	—	—	—
Science	—	—	—	—	—	—	—
Other	3,579	47.3	41.9	—	—	—	7.6
Special education	—	—	—	—	—	—	—
Sex							
Male	3,850	46.3	44.5	0.0	0.0	—	8.9
Female	10,162	21.8	58.6	7.5	1.1	0.0	11.0
Race–ethnicity							
Black, non-Hispanic	—	—	—	—	—	—	—
White, non-Hispanic	12,844	28.5	54.6	5.2	0.9	0.0	10.8
All others	—	—	—	—	—	—	—
Age							
Under 36 years	12,398	27.4	59.1	2.2	—	0.0	10.8
36–50 years	1,395	31.9	23.1	35.6	—	0.0	6.4
51 years or older	—	—	—	—	—	—	—

—Too few cases for a reliable estimate.
*Includes teachers who reported that 1987–88 was the year in which they began their first full-time teaching position at the elementary or secondary level and that teaching at the elementary or secondary level was not their main activity in 1986–87.

NOTE: Details may not add to totals due to rounding or cell suppression.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88 (Teacher Questionnaires).

Table 3—Number of newly hired, re-entrant teachers and percentage distribution of newly hired, re-entrant teachers by previous year's main activity, by sector and selected school and teacher characteristics: 1987–88

	Number of newly hired, re-entrant teachers*	Main activity during 1986–87 school year (percent)					
		Working/ not teaching	Attending college/ university	Home-making	Unemployed	Retired	Military/ unknown
Total	65,168	31.0	12.0	26.4	1.9	2.0	26.6
Public	52,589	30.0	11.4	27.0	1.8	0.5	29.3
Region							
Northeast	11,667	20.4	14.4	34.3	0.0	0.0	30.9
Midwest	10,771	26.7	10.5	27.3	3.6	—	31.8
South	21,109	39.2	6.3	25.7	2.1	—	26.3
West	9,041	24.9	20.4	20.3	1.6	—	31.1
Teaching level and field							
Elementary	21,866	23.0	7.7	38.4	1.2	0.7	28.9
Secondary							
Math/computer science	2,907	35.3	12.3	13.4	—	0.0	37.8
Science	2,531	38.7	23.3	17.1	—	0.0	18.9
Other	16,465	40.1	9.4	17.8	0.9	—	31.4
Special education	8,819	24.2	20.4	23.2	5.3	—	26.4
Sex							
Male	12,398	51.5	8.7	—	3.5	1.3	34.6
Female	39,935	23.5	12.2	34.9	1.3	—	27.8
Race–ethnicity							
Black, non-Hispanic	3,841	52.1	11.6	8.8	—	0.0	23.7
White, non-Hispanic	44,615	27.7	10.8	28.0	1.8	0.6	31.0
All others	2,327	45.2	15.8	23.0	0.0	0.0	15.9
Age							
Under 36 years	18,576	27.4	12.8	30.3	3.2	0.0	26.3
36–50 years	28,330	30.3	11.6	27.9	1.3	0.0	28.9
51 years or older	5,073	39.2	4.8	8.3	0.0	5.3	42.5
Full-time experience							
Less than 5 years	10,637	32.5	18.0	19.6	1.5	0.0	28.5
5–14 years	28,953	27.7	11.0	37.0	2.4	—	21.8
15 years or more	12,877	33.3	6.9	10.6	1.0	1.7	46.6

Table 3—Number of newly hired, re-entrant teachers and percentage distribution of newly hired, re-entrant teachers by previous year's main activity, by sector and selected school and teacher characteristics: 1987–88—Continued

	Number of newly hired, re-entrant teachers*	Main activity during 1986–87 school year (percent)					
		Working/ not teaching	Attending college/ university	Home-making	Unemployed	Retired	Military/ unknown
Private	12,579	35.3	14.8	23.6	2.4	8.4	15.5
Region							
Northeast	3,569	43.5	13.4	18.1	—	—	20.0
Midwest	2,717	22.7	15.9	37.6	2.3	0.0	21.4
South	4,319	30.2	15.3	21.7	—	—	9.3
West	1,974	48.5	14.7	18.8	—	0.0	12.7
Teaching level and field							
Elementary	6,823	24.0	13.2	35.2	2.5	—	12.3
Secondary							
Math/computer science	—	—	—	—	—	—	—
Science	—	—	—	—	—	—	—
Other	3,761	47.2	13.1	10.8	—	5.1	23.3
Special education	—	—	—	—	—	—	—
Sex							
Male	2,012	49.6	27.1	0.0	—	—	8.9
Female	10,567	32.5	12.4	28.1	1.9	—	16.8
Race–ethnicity							
Black, non-Hispanic	—	—	—	—	—	—	—
White, non-Hispanic	11,818	35.5	14.5	23.5	2.5	8.9	15.0
All others	—	—	—	—	—	—	—
Age							
Under 36 years	4,573	42.7	21.9	19.9	1.4	0.0	14.1
36–50 years	6,060	34.0	10.6	32.0	2.7	—	19.9
51 years or older	—	—	—	—	—	—	—
Full-time experience							
Less than 5 years	4,091	44.3	16.9	20.8	—	—	14.1
5–14 years	6,539	30.6	17.9	30.1	1.5	—	19.1
15 years or more	—	—	—	—	—	—	—

—Too few cases for a reliable estimate.

*Includes teachers who reported that the year in which they began their first full-time teaching position at the elementary or secondary level was prior to 1987–88 and that teaching at the elementary or secondary level was not their main activity in 1986–87.

NOTE: Details may not add to totals due to rounding or cell suppression.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88 (Teacher Questionnaires).

Table 4—Number of teachers and percentage distribution of teachers by highest degree earned, by sector and teacher status: 1987–88

	Number of teachers	Highest degree earned (percent)					
		AA/AS	BA/BS in education	BA/BS not in education	MA/MS in education	MA/MS not in education	Higher degree
Total	2,315,209*	1.0	41.9	12.4	37.6	6.2	1.0
Public	2,070,634*	0.7	41.7	11.5	39.4	5.8	0.9
Teacher status							
Newly hired, first-time	48,129	1.4	64.6	20.5	8.3	4.4	0.7
Newly hired, re-entrant	51,599	0.4	42.5	9.1	39.4	6.4	2.2
Continuing	1,948,502	0.6	41.1	11.3	40.2	5.8	0.9
Private	244,575*	3.6	43.9	19.6	21.7	9.5	1.7
Teacher status							
Newly hired, first-time	13,971	6.2	50.9	29.6	7.5	4.3	1.5
Newly hired, re-entrant	12,442	1.1	53.5	16.2	18.5	8.8	—
Continuing	214,897	3.6	42.9	19.2	22.7	9.9	1.7

*The total number of teachers and the numbers of public and private school teachers are less than numbers based on the Teacher Questionnaire published elsewhere (2,630,335; 2,323,204; and 307,131) because teachers missing data on teacher status or highest degree earned due to item nonresponse were not included in this table.
—Too few cases for a reliable estimate.

NOTE: Details may not add to totals due to rounding or cell suppression.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88 (Teacher Questionnaires).

Table 5—Percentage distribution of 1987–88 teachers by 1988–89 teacher status, by sector: 1988–89

	Stayers	Movers	Leavers
Total	86.2	7.8	5.9
Public	87.2	7.5	5.3
Private	78.4	10.2	11.4

NOTE: Details may not add to totals due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Followup Survey, 1988–89.

Table 6—Number of open teaching positions and percentage distribution of open positions by filled status, by selected public district and private school characteristics: 1987–88

	Number of open positions	Filled status of open positions (percent)	
		Filled positions	Unfilled positions
Total	259,814	89.3	10.7
Public Districts	199,914	88.5	11.5
Region			
Northeast	33,475	83.7	16.3
Midwest	42,094	87.0	13.0
South	84,098	90.3	9.7
West	40,247	90.3	9.7
Free lunch eligibility			
Less than 20%	72,170	86.9	13.1
20–49%	88,987	89.0	11.0
50% or more	35,695	90.2	9.8
Minority enrollment			
Less than 5%	49,062	87.5	12.5
5–19%	46,415	90.9	9.1
20–49%	53,991	87.2	12.8
50% or more	50,114	88.8	11.2
Private Schools	59,899	92.1	7.9
Region			
Northeast	17,549	91.9	8.1
Midwest	15,458	91.3	8.7
South	16,479	92.0	8.0
West	10,414	93.7	6.3
Free lunch eligibility			
Less than 20%	11,364	92.0	8.0
20–49%	3,972	93.0	7.0
50% or more	3,559	90.2	9.8
Minority enrollment			
Less than 5%	24,243	93.1	6.9
5–19%	17,646	91.1	8.9
20–49%	7,663	91.5	8.5
50% or more	9,237	91.9	8.1

NOTE: Details may not add to totals due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88 (School and Teacher Demand and Shortage Questionnaires).

Table 7—Total number of students and full-time-equivalent (FTE) teachers, student/teacher ratio in 1986–87 and 1987–88, and percentage change between 1986–87 and 1987–88, by sector, region, and grade level: 1987–88

	Number				Ratio		Percent change	
	1986–87 students	1986–87 FTE teachers	1987–88 students	1987–88 FTE teachers	1986–87 students/ teacher	1987–88 students/ teacher	Change in number of students	Change in number of teachers
Total	45,156,131	2,590,806	45,411,325	2,638,931	17.4	17.2	0.6	1.9
Public districts	39,711,745	2,271,533	40,003,907	2,316,942	17.5	17.3	0.7	2.0
Region								
Northeast	7,506,182	495,318	7,471,702	504,973	15.2	14.8	–0.5	1.9
Midwest	9,902,433	579,680	9,903,336	583,141	17.1	17.0	0.0	0.6
South	14,047,961	802,577	14,206,503	824,531	17.5	17.2	1.1	2.7
West	8,255,169	393,978	8,422,366	404,296	21.0	20.8	2.0	2.6
Private schools	5,444,386	319,274	5,407,418	321,989	17.1	16.8	–0.7	0.9
Region								
Northeast	1,587,947	93,609	1,573,969	93,377	17.0	16.9	–0.9	–0.2
Midwest	1,551,901	85,579	1,535,368	86,492	18.1	17.8	–1.1	1.1
South	1,388,234	89,359	1,387,947	90,635	15.5	15.3	0.0	1.4
West	916,304	50,727	910,134	51,485	18.1	17.7	0.7	1.5
Grades K–6	24,825,174	1,315,494	25,319,370	1,353,119	18.9	18.7	2.0	2.9
Sector								
Public districts	21,506,954	1,143,722	21,977,234	1,177,869	18.8	18.7	2.2	3.0
Private schools	3,318,221	171,772	3,342,135	175,250	19.3	19.1	0.7	2.0
Grades 7–12	20,330,956	1,275,313	20,091,955	1,285,458	15.9	15.6	–1.2	0.8
Sector								
Public districts	18,204,791	1,127,811	18,026,672	1,138,720	16.1	15.8	–1.0	1.0
Private schools	2,126,165	147,502	2,065,283	146,737	14.4	14.1	–2.9	–0.5

NOTE: The number of full-time-equivalent teachers in this table was estimated using data from the Teacher Demand and Shortage Questionnaires and therefore differs from the number in table 1, which was estimated using data from the Teacher Questionnaires.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88 (Teacher Demand and Shortage Questionnaires).

Table 8—Number of 1987–88 teachers and percentage distribution of 1987–88 teachers by 1988–89 teaching status and percentage distribution of those still teaching in 1988–89 by stayer/mover status, by sector and selected school and teacher characteristics: 1987–88 and 1988–89

	Number of 1987–88 teachers	1987–88 teachers		1987–88 teachers still teaching	
		Percent who left	Percent who still taught	Percent who stayed	Percent who moved
Total	2,406,193*	5.9	94.1	91.7	8.3
Public	2,151,619*	5.3	94.7	92.0	8.0
Region					
Northeast	458,728	4.4	95.6	94.6	5.4
Midwest	571,627	5.5	94.5	92.5	7.5
South	763,799	5.6	94.4	90.1	9.9
West	357,464	5.5	94.5	92.0	8.0
School level					
Elementary	1,136,413	5.0	95.0	91.2	8.8
Secondary	743,805	4.9	95.1	93.4	6.6
Combined/other	105,389	6.5	93.5	95.1	4.9
Community type					
Rural/farming	505,276	4.9	95.1	91.2	8.8
Small city	443,961	5.0	95.0	93.8	6.2
Suburban	527,705	4.7	95.3	91.9	8.1
Urban	508,665	5.5	94.5	92.3	7.7
Free lunch eligibility					
Less than 20%	836,187	5.1	94.9	93.3	6.7
20–49%	693,961	4.8	95.2	91.3	8.7
50% or more	414,150	5.5	94.5	91.3	8.7
Minority enrollment					
Less than 5%	644,058	4.9	95.1	92.7	7.3
5–19%	485,462	5.2	94.8	92.4	7.6
20–49%	441,002	4.5	95.5	92.6	7.4
50% or more	415,085	5.4	94.6	91.0	9.0

Table 8—Number of 1987–88 teachers and percentage distribution of 1987–88 teachers by 1988–89 teaching status and percentage distribution of those still teaching in 1988–89 by stayer/mover status, by sector and selected school and teacher characteristics: 1987–88 and 1988–89—Continued

	Number of 1987–88 teachers	1987–88 teachers		1987–88 teachers still teaching	
		Percent who left	Percent who still taught	Percent who stayed	Percent who moved
Teaching level and field					
Elementary	958,603	5.3	94.7	91.0	9.0
Secondary					
Math/computer science	140,044	5.2	94.8	95.0	5.0
Science	120,410	5.6	94.4	95.1	4.9
Other	726,844	5.1	94.9	93.8	6.2
Special education	204,399	5.8	94.2	86.7	13.3
Sex					
Male	644,885	4.7	95.3	92.7	7.3
Female	1,498,981	5.5	94.5	91.8	8.2
Race–ethnicity					
Black, non-Hispanic	165,055	4.1	95.9	90.8	9.2
White, non-Hispanic	1,842,502	5.5	94.5	92.1	7.9
All others	88,735	2.7	97.3	93.2	6.8
Full-time experience					
Less than 5 years	334,688	7.5	92.5	85.4	14.6
5–14 years	841,359	4.9	95.1	91.1	8.9
15 years or more	973,694	4.9	95.1	95.1	4.9
Private	254,575*	11.3	88.7	88.5	11.5
Region					
Northeast	80,897	9.6	90.4	87.4	12.6
Midwest	65,328	8.6	91.4	90.2	9.8
South	70,274	13.0	87.0	88.3	11.7
West	38,075	16.6	83.4	88.3	11.7
School level					
Elementary	118,176	10.0	90.0	87.0	13.0
Secondary	48,580	11.7	88.3	92.0	8.0
Combined/other	58,192	14.8	85.2	89.1	10.9
Community type					
Rural/farming	100,180	11.9	88.1	89.1	10.9
Small city	62,099	8.7	91.3	91.5	8.5
Suburban	43,970	10.6	89.4	87.0	13.0
Urban	18,699	21.9	78.1	79.1	20.9

Table 8—Number of 1987–88 teachers and percentage distribution of 1987–88 teachers by 1988–89 teaching status and percentage distribution of those still teaching in 1988–89 by stayer/mover status, by sector and selected school and teacher characteristics: 1987–88 and 1988–89—Continued

	Number of 1987–88 teachers	1987–88 teachers		1987–88 teachers still teaching	
		Percent who left	Percent who still taught	Percent who stayed	Percent who moved
Free lunch eligibility					
Less than 20%	49,362	8.3	91.7	90.9	9.1
20–49%	12,723	11.6	88.4	74.6	25.4
50% or more	11,133	11.0	89.0	77.8	22.2
Minority enrollment					
Less than 5%	97,932	10.8	89.2	89.7	10.3
5–19%	73,566	8.9	91.1	90.8	9.2
20–49%	24,782	22.3	77.7	85.1	14.9
50% or more	28,667	12.1	87.9	81.6	18.4
Teaching level and field					
Elementary	127,353	10.6	89.4	86.7	13.3
Secondary					
Math/computer science	16,908	10.9	89.1	85.6	14.4
Science	17,372	7.1	92.9	91.1	8.9
Other	84,870	13.0	87.0	92.4	7.6
Special education	8,073	15.5	84.5	76.3	23.7
Sex					
Male	55,187	9.4	90.6	93.3	6.7
Female	199,255	11.9	88.1	87.2	12.8
Race–ethnicity					
Black, non-Hispanic	2,629	35.1	64.9	—	—
White, non-Hispanic	237,717	10.7	89.3	89.2	10.8
All others	11,360	13.6	86.4	88.0	12.0
Full-time experience					
Less than 5 years	70,216	13.4	86.6	83.6	16.4
5-14 years	108,653	13.0	87.0	88.3	11.7
15 years or more	74,273	7.2	92.8	93.1	6.9

—Too few cases for a reliable estimate.

*The total number of teachers and the numbers of public and private school teachers are less than numbers based on the Teacher Followup Survey published elsewhere (2,699,098; 2,387,174; and 311,924) because teachers missing data on row school or teacher characteristics or on teaching status due to item nonresponse were not included in this table.

NOTE: Details may not add to totals due to rounding or cell suppression.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88 (Teacher Questionnaires) and Teacher Followup Survey, 1988–89.

Table 9—Number of full-time-equivalent (FTE) teachers, percentage distribution of teachers by hiring status, and percentage of teachers with standard certification, by sector and selected public district and private school characteristics: 1987–88

	Number of 1987–88 FTE teachers	Hiring status (percent)		Percent with standard certification	
		Newly hired	Continuing teachers	All teachers	Newly hired teachers
Total	2,638,931	8.8	91.2	93.5	88.6
Public districts	2,316,942	7.6	92.4	95.4	92.6
Region					
Northeast	504,973	5.5	94.5	94.8	93.8
Midwest	583,141	6.3	93.7	98.2	98.1
South	824,531	9.2	90.8	94.2	91.2
West	404,296	9.0	91.0	94.5	89.3
Free lunch eligibility					
Less than 20%	861,137	7.3	92.7	96.3	94.7
20–49%	992,828	8.0	92.0	94.6	92.6
50% or more	433,841	7.4	92.6	95.1	88.5
Minority enrollment					
Less than 5%	648,653	6.6	93.4	97.5	95.9
5–19%	550,432	7.7	92.3	95.7	95.0
20–49%	533,054	8.8	91.2	95.1	91.5
50% or more	582,078	7.6	92.4	92.9	88.6
Private schools	321,989	17.1	82.9	79.9	75.7
Region					
Northeast	93,377	17.3	82.7	74.2	68.1
Midwest	86,492	16.3	83.7	88.3	85.6
South	90,635	16.7	83.3	79.3	74.9
West	51,485	18.9	81.1	77.2	75.2
Free lunch eligibility					
Less than 20%	66,555	15.7	84.3	86.8	84.8
20–49%	17,431	21.2	78.8	83.8	80.4
50% or more	17,073	18.8	81.2	72.1	66.5
Minority enrollment					
Less than 5%	134,075	16.8	83.2	82.1	79.2
5–19%	98,215	16.4	83.6	80.6	74.8
20–49%	38,909	18.0	82.0	76.8	74.6
50% or more	42,381	20.0	80.0	74.2	69.4

NOTE: Details may not add to totals due to rounding. The number of full-time-equivalent teachers in this table was estimated using data from the Teacher Demand and Shortage Questionnaires and therefore differs from the number in table 1, which was estimated using data from the Teacher Questionnaires. It differs from the number shown in table 7 (which was also estimated from the Teacher Demand and Shortage Questionnaires) because the number in table 7 includes pre-Kindergarten teachers.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88 (Teacher Demand and Shortage Questionnaires).

Table 10—Number of full-time-equivalent (FTE) public school teachers, percentage distribution of teachers by hiring status, and percentage of teachers with standard certification, by state: 1987–88

	Number of FTE teachers	Hiring status (percent)		Percent with standard certification	
		Newly hired	Continuing teachers	All teachers	Newly hired teachers
Total	2,316,942	7.6	92.4	95.4	92.6
Alabama	36,983	7.8	92.2	92.4	90.4
Alaska	6,088	5.8	94.2	99.5	89.0
Arizona	27,596	11.8	88.2	99.5	99.4
Arkansas	29,543	12.3	87.7	96.7	96.1
California	203,036	8.4	91.6	93.3	84.1
Colorado	29,857	9.0	91.0	97.5	99.0
Connecticut	33,935	6.4	93.6	96.1	82.0
Delaware	6,579	5.4	94.6	87.9	95.4
Dist. of Columbia	5,099	6.1	93.9	80.4	100.0
Florida	91,036	8.4	91.6	89.7	90.9
Georgia	63,730	12.3	87.7	95.6	96.3
Hawaii	8,677	9.6	90.4	100.0	100.0
Idaho	10,186	9.9	90.1	99.2	99.6
Illinois	108,747	5.5	94.5	99.2	98.8
Indiana	55,490	6.5	93.5	93.5	96.1
Iowa	33,233	6.7	93.3	98.9	96.8
Kansas	26,722	9.0	91.0	98.2	99.4
Kentucky	38,551	6.9	93.1	99.3	98.6
Louisiana	40,962	7.5	92.5	82.9	76.7
Maine	15,814	8.7	91.3	98.3	93.1
Maryland	32,626	8.0	92.0	97.5	85.7
Massachusetts	61,718	6.6	93.4	96.2	93.0
Michigan	81,963	4.4	95.6	99.0	98.1
Minnesota	42,414	7.3	92.7	98.7	99.0
Mississippi	26,772	8.7	91.3	96.8	97.8
Missouri	51,708	8.0	92.0	99.3	97.0
Montana	12,225	7.7	92.3	97.8	98.9
Nebraska	16,850	8.4	91.6	99.0	99.7
Nevada	7,731	13.2	86.8	96.4	82.2
New Hampshire	11,401	12.7	87.3	97.9	90.3
New Jersey	76,689	5.9	94.1	98.2	98.0
New Mexico	13,847	12.8	87.2	94.6	82.4
New York	186,059	5.5	94.5	97.5	94.1
North Carolina	62,583	9.1	90.9	97.3	98.5
North Dakota	8,052	5.5	94.5	99.0	99.7
Ohio	105,623	6.1	93.9	97.4	98.8
Oklahoma	38,449	6.0	94.0	98.7	94.9
Oregon	24,526	8.1	91.9	97.1	97.8
Pennsylvania	104,117	3.2	96.8	84.7	97.1
Rhode Island	9,012	4.1	95.9	98.9	—
South Carolina	34,255	9.6	90.4	97.7	95.4
South Dakota	8,649	8.5	91.5	99.0	99.6
Tennessee	45,722	6.3	93.7	92.9	95.7
Texas	183,932	11.9	88.1	96.5	86.5

Table 10—Number of full-time-equivalent (FTE) public school teachers, percentage distribution of teachers by hiring status, and percentage of teachers with standard certification, by state: 1987–88—Continued

	Number of FTE teachers	Hiring status (percent)		Percent with standard certification	
		Newly hired	Continuing teachers	All teachers	Newly hired teachers
Utah	15,751	12.3	87.7	80.7	95.3
Vermont	6,227	8.8	91.2	97.4	97.4
Virginia	65,076	8.1	91.9	89.5	89.9
Washington	38,031	8.1	91.9	92.8	94.7
West Virginia	22,632	5.3	94.7	92.3	87.9
Wisconsin	43,692	5.8	94.2	99.3	96.4
Wyoming	6,745	4.5	95.5	98.9	99.6

—Too few cases for a reliable estimate.

NOTE: Details may not add to totals due to rounding or cell suppression. Numbers and percentages for Delaware, the District of Columbia, Hawaii, Nevada, and West Virginia are universe figures because all school districts in these jurisdictions were included in the sample. Estimates for all other states except Maryland and Utah are based on samples of at least 30 cases. The number of sample cases is 18 for Maryland and 29 for Utah..

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88 (Teacher Demand and Shortage Questionnaires).

Table 11—Percentage of public school teachers certified in their main and other assignment fields and percentage distribution of certified teachers by type of certification, by teaching level and field and by state: 1987–88

	Certified in main field	Type of certification			Certified another field	Type of certification		
		Standard	Probationary	Temporary		Standard	Probationary	Temporary
Total	97.5	91.6	2.9	5.4	65.0	91.1	3.4	5.5
Teaching level and field								
Elementary	98.2	90.8	2.7	6.4	49.5	89.9	3.7	6.4
Secondary								
Math/computer science	93.8	92.6	2.9	4.5	70.2	91.5	3.8	4.7
Science	96.5	91.7	3.8	4.5	76.2	91.8	3.7	4.6
Other	97.5	93.5	3.0	3.5	69.3	93.0	3.0	4.0
Special education	97.1	88.0	3.4	8.7	73.9	85.6	4.1	10.3
State								
Alabama	98.8	96.0	2.1	1.9	61.4	97.2	—	—
Alaska	93.0	99.0	0.0	—	50.0	100.0	0.0	0.0
Arizona	96.4	91.7	2.5	5.8	55.7	90.1	4.6	5.3
Arkansas	98.2	95.2	1.1	3.7	65.6	97.2	0.0	2.8
California	96.9	89.1	3.8	7.1	65.7	91.5	2.3	6.3
Colorado	97.1	94.8	2.6	2.5	52.4	93.7	—	4.5
Connecticut	98.2	80.1	6.8	13.1	62.9	84.0	9.0	7.0
Delaware	96.9	93.9	2.9	3.2	56.2	92.7	—	—
Dist. of Columbia	93.4	79.7	14.1	6.2	—	—	—	—
Florida	94.7	89.2	4.1	6.7	55.4	88.0	2.6	9.3
Georgia	98.5	90.7	3.3	6.0	50.0	91.8	4.0	4.2
Hawaii	94.9	90.7	7.2	2.1	33.1	—	—	—
Idaho	98.9	94.9	—	4.6	70.2	96.0	—	3.0
Illinois	95.6	91.2	1.3	7.5	60.1	93.9	—	6.0
Indiana	99.0	94.9	1.1	4.0	70.1	92.4	2.2	5.4
Iowa	99.0	95.1	1.2	3.7	73.0	95.7	—	2.8
Kansas	99.0	97.5	—	2.3	75.3	95.9	—	3.4
Kentucky	99.0	89.9	1.8	8.3	75.5	91.3	0.0	8.7
Louisiana	96.5	93.1	2.2	4.6	56.3	93.9	—	4.9
Maine	97.4	86.2	5.5	8.3	54.8	83.5	—	11.8
Maryland	97.9	92.9	3.1	3.9	57.8	96.5	—	0.0
Massachusetts	95.9	96.1	—	3.7	61.0	96.2	—	2.2
Michigan	97.8	90.3	3.2	6.5	81.5	88.2	2.5	9.3
Minnesota	99.1	93.3	3.7	3.0	69.4	92.2	6.2	—
Mississippi	99.4	94.4	1.4	4.2	61.2	95.0	—	3.9
Missouri	98.8	96.7	0.5	2.8	77.8	87.5	1.9	10.6
Montana	99.0	93.1	4.4	2.5	68.6	93.3	5.8	—
Nebraska	98.4	90.7	8.2	1.1	55.5	95.3	—	—
Nevada	96.4	91.5	3.6	5.0	70.2	97.3	—	0.0
New Hampshire	97.2	94.1	3.1	2.8	44.5	100.0	0.0	0.0
New Jersey	97.6	98.1	0.0	1.9	63.9	97.8	0.0	2.2
New Mexico	97.2	95.5	—	3.9	71.8	96.0	0.0	4.0

Table 11—Percentage of public school teachers certified in their main and other assignment fields and percentage distribution of certified teachers by type of certification, by teaching level and field and by state: 1987–88—Continued

	Certified in main field	Type of certification			Certified another field	Type of certification		
		Standard	Probationary	Temporary		Standard	Probationary	Temporary
New York	95.4	85.6	5.3	9.1	54.5	82.4	8.5	9.1
North Carolina	98.4	89.9	6.4	3.7	66.1	83.9	6.1	10.0
North Dakota	99.5	97.5	1.8	0.7	71.2	98.1	—	—
Ohio	99.1	90.2	1.3	8.5	67.6	88.7	3.2	8.1
Oklahoma	98.1	95.2	0.9	3.9	65.7	94.3	3.5	2.2
Oregon	98.2	90.4	5.8	3.8	53.9	87.1	9.9	—
Pennsylvania	98.7	92.6	3.5	3.9	69.6	87.9	4.0	8.1
Rhode Island	97.8	94.5	2.2	3.4	75.3	86.4	8.3	5.3
South Carolina	96.1	97.3	—	2.5	51.4	89.8	—	6.6
South Dakota	99.4	97.6	1.3	1.2	69.0	97.3	—	0.0
Tennessee	97.7	89.1	6.3	4.6	73.5	87.0	12.8	—
Texas	97.0	91.2	2.3	6.5	71.2	91.7	3.5	4.8
Utah	97.9	93.9	2.1	4.0	64.1	89.5	5.8	4.7
Vermont	99.7	89.2	9.6	1.2	56.7	—	—	—
Virginia	96.6	92.4	3.8	3.8	62.3	91.4	5.5	3.1
Washington	97.5	90.1	5.4	4.5	66.0	90.1	6.2	3.7
West Virginia	98.1	90.0	3.3	6.8	78.7	92.8	3.1	4.0
Wisconsin	99.7	94.5	1.7	3.8	71.7	94.4	—	4.4
Wyoming	99.0	95.5	1.3	3.2	71.3	94.0	—	3.6

—Too few cases for a reliable estimate.
NOTE: Details may not add to totals due to rounding or cell suppression.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88 (Teacher Questionnaires).

Table 12—Attrition rate: percentage of teachers who left teaching (leavers) by sex, age, years of teaching experience, by sector and selected school and teacher characteristics: 1987–88 and 1988–89

	Sex		Age			Years teaching experience		
	Female	Male	Less than 36	36–50	51 or more	Less than 11	11–25	26 or more
Total	6.3	5.1	7.7	3.3	10.6	7.3	4.0	10.3
Public	5.5	4.7	6.8	2.7	10.6	6.3	3.6	10.6
Region								
Northeast	4.5	4.1	6.8	1.7	9.6	5.9	2.2	11.4
Midwest	6.1	4.2	6.7	1.9	12.7	6.6	4.1	8.3
South	5.4	6.2	6.9	3.4	11.4	7.1	3.4	13.3
West	6.2	4.3	6.5	3.9	8.1	4.6	5.4	9.8
School level								
Elementary	5.2	3.7	6.0	2.7	9.3	5.3	3.8	10.6
Secondary	5.1	4.6	6.5	2.8	9.3	6.6	2.9	9.6
Combined/other	7.4	5.0	6.2	4.2	16.3	7.8	5.7	6.4
Community type								
Rural/farming	4.9	4.4	5.4	2.7	7.6	5.4	4.1	6.4
Small city	5.7	3.5	6.9	3.9	7.2	7.0	3.4	6.6
Suburban	4.8	4.5	6.4	2.1	9.5	5.3	3.1	13.4
Urban	5.8	5.0	6.3	2.5	15.3	5.9	3.7	18.6
Free lunch eligibility								
Less than 20%	5.6	4.0	7.7	2.9	8.5	7.1	3.1	8.9
20–49%	4.9	4.3	5.0	2.8	9.9	4.6	3.7	11.7
50% or more	5.4	5.7	5.9	2.6	12.9	6.0	4.2	10.2
Minority enrollment								
Less than 5%	5.3	4.1	5.8	2.5	10.7	6.1	3.5	8.3
5–19%	6.0	3.8	6.9	3.5	8.9	7.1	3.3	10.7
20–49%	4.4	5.0	5.4	2.7	9.7	3.8	3.6	14.9
50% or more	5.4	5.1	6.9	2.6	8.6	6.3	4.0	8.1
Teaching level and field								
Elementary	5.6	3.0	7.1	2.2	10.4	6.0	3.7	11.0
Secondary								
Math/computer science	4.1	6.3	6.3	3.2	11.2	7.5	3.1	—
Science	6.6	4.6	5.0	4.7	12.4	5.6	4.1	—
Other	5.4	4.9	8.0	2.5	10.4	7.2	2.9	9.5
Special education	5.9	5.1	4.9	4.8	13.1	5.6	6.0	—
Sex								
Male	(*)	4.7	6.0	2.6	9.9	5.9	2.6	10.9
Female	5.5	(*)	7.0	2.7	10.9	6.5	4.0	10.3
Race–ethnicity								
Black, non-Hispanic	4.0	4.5	2.8	1.0	13.0	2.8	3.3	13.0
White, non-Hispanic	5.8	4.7	7.3	2.9	10.7	6.8	3.7	10.6
All others	2.9	2.1	2.8	2.5	2.9	3.0	2.2	—

Table 12—Attrition rate: percentage of teachers who left teaching (leavers) by sex, age, years of teaching experience, by sector and selected school and teacher characteristics: 1987–88 and 1988–89—Continued

	Sex		Age			Years teaching experience		
	Female	Male	Less than 36	36–50	51 or more	Less than 11	11–25	26 or more
Private	11.9	9.4	13.5	9.6	10.8	12.9	9.9	8.2
Region								
Northeast	9.9	8.8	12.5	8.2	5.6	13.0	5.1	5.7
Midwest	9.2	5.2	13.9	5.4	9.0	12.4	5.7	3.0
South	13.6	10.4	13.5	12.7	13.0	10.7	18.5	—
West	18.0	13.4	15.2	14.9	—	16.7	10.9	—
School level								
Elementary	9.2	17.0	12.5	8.1	8.6	12.4	6.7	7.4
Secondary	16.4	5.3	14.9	9.5	—	15.8	9.0	—
Combined/other	17.1	7.4	13.8	15.5	19.2	12.2	22.1	—
Community type								
Rural/farming	12.4	10.3	12.7	11.0	12.0	11.9	12.0	—
Small city	9.5	5.6	11.4	5.9	8.8	9.3	9.7	—
Suburban	11.5	6.6	15.6	7.8	7.1	13.4	9.3	—
Urban	23.3	16.9	19.0	24.6	—	26.6	12.7	—
Free lunch eligible								
Less than 20%	7.8	12.6	13.9	3.0	10.5	10.9	5.0	—
20–49%	11.5	—	11.3	14.0	—	20.6	—	—
50% or more	5.6	—	3.3	—	—	14.2	—	—
Minority enrollment								
Less than 5%	12.4	5.1	14.1	9.4	7.3	12.4	9.6	6.5
5–19%	8.9	9.0	10.9	7.7	7.3	10.0	10.0	—
20–49%	28.5	6.2	21.9	17.6	—	20.1	21.5	—
50% or more	8.4	33.3	8.4	17.1	—	14.8	9.4	—
Teaching level and field								
Elementary	9.8	21.0	13.1	8.4	9.8	13.0	7.1	6.8
Secondary								
Math/computer science	8.4	15.7	13.1	—	—	14.3	—	—
Science	6.0	8.9	6.8	7.6	—	7.5	—	—
Other	18.1	5.2	16.8	10.6	11.8	13.4	14.1	—
Special education	14.7	—	4.8	—	—	14.8	—	—
Sex								
Male	(*)	9.4	9.8	8.8	10.5	12.3	4.3	—
Female	11.9	(*)	14.7	9.8	10.9	13.0	11.6	6.7
Race–ethnicity								
Black, non-Hispanic	24.6	—	—	—	—	30.2	—	—
White, non-Hispanic	11.6	7.6	13.3	9.0	8.9	12.2	9.8	5.9
All others	14.2	—	14.9	—	—	13.0	—	—

—Too few cases for a reliable estimate.
(*) Not applicable.
NOTE: Details may not add to totals due to rounding or cell suppression.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88 (Teacher Questionnaires) and Teacher Followup Survey, 1988–89.

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Table 13—Percentage distribution of teachers by age, by sector and selected school and teacher characteristics: 1987–88

	Percent in age group									
	< 26	26–30	31–35	36–40	41–45	46–50	51–55	56–60	61–65	66+
Total	5.8	11.1	15.0	22.3	17.7	11.8	8.5	5.4	2.0	0.4
Public	5.2	10.6	15.0	22.6	18.1	12.0	8.8	5.5	1.9	0.3
Region										
Northeast	4.1	8.7	13.1	24.2	19.4	12.3	9.6	6.1	2.2	0.3
Midwest	5.4	9.9	14.6	22.0	18.6	12.5	8.8	5.7	2.1	0.4
South	6.2	12.7	17.1	22.9	16.7	10.9	7.2	4.5	1.5	0.2
West	4.1	9.5	13.4	21.0	18.8	13.3	11.1	6.6	1.9	0.4
School level										
Elementary	5.6	10.8	15.2	23.1	17.3	11.8	8.6	5.6	2.0	0.3
Secondary	4.3	9.8	14.6	22.7	19.6	12.6	9.2	5.3	1.6	0.3
Combined/other	6.4	13.8	17.1	21.3	16.0	10.5	7.8	4.9	1.9	0.3
Community type										
Rural/farming	4.2	9.5	13.8	21.5	18.9	12.9	9.8	6.6	2.2	0.4
Small city	4.4	9.3	13.0	22.4	20.6	13.1	9.7	5.6	1.6	0.4
Suburban	5.1	10.7	15.4	23.9	17.7	11.8	8.5	5.0	1.8	0.2
Urban	6.7	12.5	17.7	23.5	15.7	10.4	7.1	4.5	1.7	0.2
Free lunch eligibility										
Less than 20%	4.7	9.5	13.7	23.2	19.5	13.1	9.4	5.3	1.5	0.2
20–49%	5.7	11.5	16.4	22.8	16.8	11.4	8.0	5.4	1.9	0.3
50% or more	5.3	11.5	15.8	22.3	17.2	10.9	8.5	5.7	2.3	0.5
Minority enrollment										
Less than 5%	5.4	10.8	15.8	24.5	17.3	11.4	8.1	4.7	1.7	0.2
5–19%	4.9	9.5	14.3	22.8	19.7	12.6	9.0	5.4	1.6	0.2
20–49%	5.2	11.3	14.9	20.9	18.1	12.4	9.0	6.3	1.7	0.2
50% or more	4.9	10.6	14.9	22.1	17.5	12.0	9.3	5.8	2.4	0.6

Table 13—Percentage distribution of teachers by age, by sector and selected school and teacher characteristics: 1987–88—Continued

	Percent in age group									
	< 26	26–30	31–35	36–40	41–45	46–50	51–55	56–60	61–65	66+
Teaching level and field										
Elementary	5.5	9.8	14.5	22.7	17.6	12.2	9.1	6.0	2.3	0.3
Secondary										
Math/computer science	7.1	10.3	12.3	24.6	20.8	11.0	7.9	4.0	1.8	0.2
Science	4.4	12.4	14.5	21.0	18.4	13.9	8.7	4.9	1.5	0.1
Other	3.8	9.3	14.4	22.5	19.9	12.9	9.4	5.8	1.6	0.3
Special education	7.7	17.9	22.0	22.2	12.1	7.8	5.6	3.4	1.1	0.3
Sex										
Male	3.1	9.0	13.7	23.7	19.7	13.0	10.2	5.7	1.5	0.3
Female	6.1	11.3	15.5	22.2	17.4	11.6	8.2	5.4	2.0	0.3
Race–ethnicity										
Black, non-Hispanic	2.2	8.0	16.1	22.9	18.7	12.5	10.0	6.7	2.5	0.5
White, non-Hispanic	5.6	10.8	14.9	22.6	18.2	12.1	8.7	5.3	1.8	0.2
All others	4.8	13.0	16.3	23.2	16.2	10.0	7.9	5.5	2.0	1.0
Private	10.9	14.9	15.1	19.6	14.6	10.0	6.2	4.8	2.8	1.2
Region										
Northeast	12.9	14.1	15.9	15.5	14.7	10.1	6.6	4.4	4.2	1.6
Midwest	11.6	16.2	12.6	18.8	15.6	9.6	6.6	4.7	2.6	1.7
South	8.6	13.5	16.9	23.0	14.0	9.9	5.5	5.4	2.5	0.8
West	10.0	16.6	14.7	22.6	13.8	10.5	6.0	4.4	1.1	0.3
School level										
Elementary	11.6	15.1	15.9	19.7	13.5	8.9	6.5	4.2	2.8	1.8
Secondary	6.8	13.7	13.6	19.7	17.7	12.6	5.6	5.4	3.4	1.3
Combined/other	12.6	16.2	15.5	20.0	13.5	8.3	6.0	5.2	2.1	0.6
Community type										
Rural/farming	9.8	14.9	17.6	21.0	14.3	9.1	6.5	3.9	1.7	1.2
Small city	10.1	16.3	13.7	17.7	15.5	11.5	5.1	5.6	3.2	1.1
Suburban	12.1	16.1	14.2	19.7	13.5	7.0	7.8	3.6	3.6	2.4
Urban	15.6	11.2	12.5	20.0	13.2	10.1	5.0	7.9	3.8	0.8

Table 13—Percentage distribution of teachers by age, by sector and selected school and teacher characteristics: 1987–88—Continued

	Percent in age group									
	< 26	26–30	31–35	36–40	41–45	46–50	51–55	56–60	61–65	66+
Free lunch eligibility										
Less than 20%	11.9	12.8	14.6	18.6	15.4	10.2	7.4	4.7	3.3	1.1
20–49%	15.7	11.5	19.8	19.7	7.9	6.7	8.9	3.0	3.9	3.0
50% or more	14.3	19.1	18.8	13.4	12.0	7.7	8.6	2.6	1.9	1.5
Minority enrollment										
Less than 5%	11.2	14.3	16.8	19.9	14.6	9.5	6.2	3.9	2.4	1.4
5–19%	9.9	15.9	14.2	20.7	13.4	10.5	6.1	5.2	2.4	1.6
20–49%	11.8	15.9	12.3	17.2	15.3	9.7	5.3	6.9	4.6	1.2
50% or more	11.7	15.6	16.4	19.7	14.7	6.6	7.8	4.4	2.6	0.6
Teaching level and field										
Elementary	12.0	15.2	14.9	20.2	14.0	9.0	5.8	5.0	2.3	1.5
Secondary										
Math/computer science	16.3	12.0	11.9	17.9	13.4	13.0	5.8	6.7	3.0	0.0
Science	10.4	15.6	15.4	22.8	13.5	10.3	6.8	—	4.5	0.0
Other	7.5	13.9	16.2	18.7	16.5	11.3	6.3	5.1	3.3	1.3
Special education	16.1	26.6	14.6	15.2	8.6	5.2	10.7	1.5	1.1	—
Sex										
Male	7.8	15.5	17.0	19.3	15.5	9.7	6.6	4.6	3.6	0.5
Female	11.8	14.7	14.5	19.7	14.3	10.1	6.0	4.8	2.6	1.4
Race–ethnicity										
Black, non-Hispanic	11.9	14.0	22.4	20.0	15.7	4.2	6.1	0.9	4.3	—
White, non-Hispanic	11.0	15.1	14.9	19.3	15.0	10.0	6.2	4.9	2.5	1.1
All others	10.7	12.4	15.0	24.3	10.2	12.1	5.3	4.2	5.1	0.8

—Too few cases for a reliable estimate.

NOTE: Details may not add to totals due to rounding or cell suppression.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987-88 (Teacher Questionnaires).

Table 14—Percentage distribution of leavers by main reasons for leaving, by sector, by selected school and teacher characteristics: 1987–88 and 1988–89

	Public					Private				
	Career*	Family/ health	Child-rearing	Retire-ment	Invol-untary	Career	Family/ health	Child-rearing	Retire-ment	Invol-untary
Total	32.8	15.2	19.4	28.0	4.6	36.4	29.8	22.2	5.2	6.4
Region										
Northeast	35.6	10.7	14.9	32.3	6.4	48.8	16.9	23.3	3.3	7.8
Midwest	29.7	17.8	15.9	31.5	5.1	23.3	35.2	28.7	7.2	5.7
South	36.9	14.8	23.9	20.6	3.8	31.2	46.0	9.7	7.2	5.9
West	40.4	18.6	11.7	24.0	5.3	38.8	21.1	33.5	—	4.6
Community type										
Rural/farming	43.8	8.1	21.0	23.8	3.2	42.4	26.8	22.0	2.2	6.6
Small city	36.2	12.3	25.9	18.7	6.9	28.2	34.6	19.5	10.9	6.7
Suburban	35.3	18.8	15.3	26.9	3.6	39.0	33.6	22.9	2.4	2.2
Urban	27.6	22.4	11.8	32.6	5.6	22.4	34.2	27.1	8.6	7.7
School level										
Elementary	29.8	14.2	26.0	27.5	2.4	33.9	27.8	25.9	6.1	6.2
Secondary	45.0	17.8	6.8	22.1	8.3	60.0	10.1	21.9	2.3	5.7
Combined/other	31.5	16.5	12.3	32.9	6.8	22.2	48.4	18.1	5.3	6.0
Teaching level and field										
Elementary	21.3	15.0	30.0	32.2	1.6	27.6	31.8	27.4	5.4	7.8
Secondary										
Math/computer science	53.7	12.7	3.6	24.4	5.7	53.6	22.0	3.6	13.9	—
Science	60.1	12.9	4.6	15.1	7.2	—	—	—	—	—
Other	38.4	17.3	10.9	26.5	6.9	44.8	32.6	14.6	4.4	3.6
Special education	36.3	11.1	19.4	25.3	7.8	—	—	—	—	—
Sex										
Male	50.6	11.2	0.0	31.5	6.7	50.9	13.7	13.4	9.2	12.9
Female	26.2	16.8	26.5	26.7	3.8	33.2	33.4	24.2	4.3	5.0

Table 14—Percentage distribution of leavers by main reasons for leaving, by sector, by selected school and teacher characteristics: 1987–88 and 1988–89—Continued

	Public					Private				
	Career*	Family/ health	Child-rearing	Retire-ment	Involuntary	Career	Family/ health	Child-rearing	Retire-ment	Involuntary
Race–ethnicity										
Black, non-Hispanic	47.5	13.6	—	33.2	5.3	—	—	—	—	—
White, non-Hispanic	31.3	15.7	20.7	27.7	4.6	35.8	31.4	21.7	4.4	6.7
All others	37.4	13.8	28.9	15.9	4.0	—	—	—	—	—
Full-time										
Less than 5 years	37.6	21.4	30.4	—	10.0	52.8	24.2	16.8	0.0	6.2
5–14 years	34.6	22.4	32.9	5.9	4.2	23.8	38.0	33.8	—	3.9
15 years or more	28.5	5.7	1.9	61.7	2.1	41.0	18.1	—	26.7	13.4

—Too few cases for a reliable estimate.

*Teachers who left for career reasons include leavers who reported that they left to pursue another career, for better salary or benefits, to take courses to improve career opportunities inside or outside the field of education, to take a sabbatical or other break from teaching, or because they were dissatisfied with teaching as a career.

NOTE: Details may not add to totals due to rounding or cell suppression.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88 (Teacher Questionnaires) and Teacher Followup Survey, 1988–89.

Table 15—Number of teachers, percentage distribution of teachers by highest degree earned, and percentage of teachers certified in main assignment field, by sector, 1988–89 teaching status, and reason for leaving: 1987–88 and 1988–89

	Number of 1987–88 teachers	Degree (percent)						Percent certified in main assignment field
		AA/AS	BA/BS in education	BA/BS not in education	MA/MS in education	MA/MS not in education	Higher degree	
Total	2,376,612*	1.0	41.2	12.1	34.6	5.2	5.8	94.5
Public	2,123,982*	0.8	41.2	11.2	36.0	4.8	6.0	97.5
1988–89 status								
Still teaching	2,011,271	0.8	41.1	11.2	36.2	4.7	6.0	97.5
Not teaching	112,711	0.4	41.9	10.8	34.2	6.4	6.4	97.1
Reason for leaving								
Career	36,771	—	33.9	9.7	43.7	6.2	6.4	97.1
Family/health	16,950	0.7	41.8	21.6	27.2	4.0	4.7	98.7
Childrearing	21,890	—	72.2	7.3	16.3	2.7	1.6	95.6
Retirement	31,421	0.4	32.0	7.9	40.2	11.1	8.3	98.0
Involuntarily	5,123	—	34.2	16.6	31.1	4.3	12.2	93.3
Private	252,630*	3.1	42.0	19.4	22.3	8.7	4.5	69.9
1988–89 status								
Still teaching	223,859	2.5	42.2	19.5	22.7	8.9	4.2	71.0
Not teaching	28,771	8.2	40.4	18.7	18.4	7.6	6.8	61.9
Reason for leaving								
Career	10,475	6.4	27.7	28.9	18.3	8.5	10.3	49.3
Family/health	8,594	18.4	46.8	9.8	10.7	10.1	4.3	65.6
Childrearing	6,395	0.0	59.6	12.1	27.0	—	0.0	72.0
Retirement	—	—	—	—	—	—	—	—
Involuntarily	1,781	0.0	26.8	31.2	18.4	14.7	—	55.7

—Too few cases for a reliable estimate.
*The total number of teachers and the numbers of public and private school teachers are less than numbers based on the Teacher Followup Survey published elsewhere (2,699,098; 2,387,174; and 311,924) because teachers missing data on the row teacher characteristics, highest degree earned, or certification status in main field due to item nonresponse were not included in this table.
NOTE: Details may not add to totals due to rounding or cell suppression.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88 (Teacher Questionnaires) and Teacher Followup Survey, 1988-89.

Table 16—Number of voluntary, nonretiring leavers, percentage of voluntary, nonretiring leavers who planned to return, and percentage distribution of those who planned to return by when they planned to return, by sector and selected teacher characteristics: 1987–88 and 1988–89

	Number of voluntary nonretiring leavers	Percent who planned to return to teaching	When they planned to return			
			By next year	Within 5 years	In more than 5 years	Undecided
Total	105,217	41.9	61.8	25.7	8.5	4.1
Public	79,743	42.3	63.9	26.3	5.9	3.9
Teaching level and field						
Elementary	33,782	53.5	71.5	17.6	7.7	3.2
Secondary						
Math/computer science	5,141	33.4	—	—	—	—
Science	5,241	31.7	—	—	—	—
Other	25,886	33.5	54.3	36.9	3.2	5.6
Special education	9,543	37.9	51.4	39.7	7.6	—
Sex						
Male	19,597	22.8	61.2	28.7	6.6	3.6
Female	59,794	48.7	64.2	26.0	5.9	3.9
Race–ethnicity						
Black, non-Hispanic	4,197	12.4	—	—	—	—
White, non-Hispanic	71,674	43.9	65.0	25.4	5.9	3.6
All others	1,900	49.1	—	—	—	—
Full-time experience						
Less than 5 years	21,779	54.3	60.3	25.9	10.0	3.8
5–14 years	38,995	47.6	65.0	27.3	4.0	3.7
15 years or more	18,880	17.6	70.8	21.8	—	5.1
Private	25,474	40.8	54.8	23.7	16.6	4.8
Teaching level and field						
Elementary	11,714	48.4	49.6	26.0	21.0	3.4
Secondary						
Math/computer science	—	—	—	—	—	—
Science	—	—	—	—	—	—
Other	10,056	29.0	54.1	22.1	15.4	8.4
Special education	—	—	—	—	—	—
Sex						
Male	4,101	35.2	—	—	—	—
Female	21,373	41.9	50.4	25.0	19.0	5.6
Race–ethnicity						
Black, non-Hispanic	—	—	—	—	—	—
White, non-Hispanic	22,601	39.2	52.2	24.9	18.5	4.5
All others	—	—	—	—	—	—

Table 16—Number of voluntary, nonretiring leavers, percentage of voluntary, nonretiring leavers who planned to return, and percentage distribution of those who planned to return by when they planned to return, by sector and selected teacher characteristics: 1987–88 and 1988–89—Continued

	Number of voluntary nonretiring leavers	Percent who planned to return to teaching	When they planned to return			
			By next year	Within 5 years	In more than 5 years	Undecided
Full-time experience						
Less than 5 years	8,803	45.4	43.4	32.7	17.0	6.9
5–14 years	13,437	44.2	61.2	17.3	17.7	
15 years or more	3,234	14.4	—	—	—	—

—Too few cases for a reliable estimate.

NOTE: Details may not add to totals due to rounding or cell suppression.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88 (Teacher Questionnaires) and Teacher Followup Survey, 1988–89.

Table 17—Percentage distribution of voluntary, nonretiring 1987–88 leavers by 1988–89 occupational status, and percentage distribution of those in noneducation jobs by type of job, by sector and selected teacher characteristics: 1987–88 and 1988–89

	1988–89 Occupational status					Noneducation job				
	Attending college/ university	Home-making	Nonteaching job in education	Non-education job	Other	Prof./ technical	Manage-ment	Service/ sales	Clerical	Other
Total	7.5	35.5	17.3	25.2	14.5	10.5	23.3	17.6	33.4	15.2
Public	7.5	36.6	20.0	20.3	15.6	13.7	26.8	20.0	20.9	18.7
Teaching level and field										
Elementary	6.1	53.7	15.5	9.6	15.0	—	—	—	—	—
Secondary										
Math/computer science	12.9	9.4	24.3	36.2	17.1	—	—	—	—	—
Science	12.6	12.9	31.3	39.0	4.2	—	—	—	—	—
Other	7.5	26.3	23.2	28.6	14.4	11.0	28.1	12.0	31.9	16.9
Special education	6.8	30.3	18.7	17.4	26.9	—	—	—	—	—
Sex										
Male	10.4	—	25.0	44.3	20.2	14.8	18.6	22.0	24.1	20.5
Female	6.2	48.5	18.4	12.6	14.2	12.1	38.4	17.3	16.3	16.0
Race–ethnicity										
Black, non-Hispanic	4.4	3.9	74.7	7.4	9.6	—	—	—	—	—
White, non-Hispanic	7.6	38.9	16.0	21.3	16.2	13.7	26.9	17.2	21.8	20.4
All others	6.1	39.4	36.6	8.7	9.2	—	—	—	—	—
Full-time experience										
Less than 5 years	11.8	41.6	7.6	31.5	7.5	10.5	15.3	19.7	44.0	10.4
5–14 years	7.1	47.8	13.7	16.9	14.4	17.9	39.5	19.2	—	21.8
15 years or more	3.4	8.0	46.9	14.2	27.6	11.6	24.9	22.7	10.1	30.7

Table 17—Percentage distribution of voluntary, nonretiring 1987–88 leavers by 1988–89 occupational status, and percentage distribution of those in noneducation jobs by type of job, by sector and selected teacher characteristics: 1987–88 and 1988–89—Continued

	1988–89 Occupational status					Noneducation job				
	Attending college/ university	Home-making	Nonteaching job in education	Non-education job	Other	Prof./ technical	Manage-ment	Service/ sales	Clerical	Other
Private	7.7	32.3	8.8	40.4	10.8	6.2	18.5	14.3	50.6	10.4
Teaching level and field										
Elementary	6.6	46.2	9.0	28.7	9.5	—	23.8	29.6	35.0	9.8
Secondary										
Math/computer science	—	—	—	—	—	—	—	—	—	—
Science	—	—	—	—	—	—	—	—	—	—
Other	7.1	24.5	9.2	55.1	4.1	4.0	16.1	3.0	64.8	12.0
Special education	—	—	—	—	—	—	—	—	—	—
Sex										
Male	13.3	17.0	6.1	57.6	6.0	—	—	—	—	—
Female	6.6	35.2	9.3	37.2	11.8	4.5	15.4	14.0	61.1	5.0
Race–ethnicity										
Black, non-Hispanic	—	—	—	—	—	—	—	—	—	—
White, non-Hispanic	6.8	32.5	6.9	42.1	11.7	5.3	18.4	14.8	50.3	11.2
All others	—	—	—	—	—	—	—	—	—	—
Full-time experience										
Less than 5 years	18.6	23.8	8.2	40.5	8.9	4.6	24.7	16.6	38.0	16.1
5–14 years	2.0	44.9	1.1	41.1	10.8	7.5	12.5	13.5	59.7	6.8
15 years or more	1.4	—	42.4	37.6	16.1	—	—	—	—	—

—Too few cases for a reliable estimate.
NOTE: Details may not add to totals due to rounding or cell suppression.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88 (Teacher Questionnaires) and Teacher Followup Survey, 1988–89.

Appendix A

Standard Errors

Table A.1—Standard errors for table 1: Number of teachers and percentage distribution of teachers by teacher status, by sector and selected school and teacher characteristics: 1987–88

	Number of teachers	Teacher status (percent)			
		Stayers	Movers	First-time teachers	Re-entrants
Total	13,912.5	0.17	0.15	0.07	0.10
Public	12,936.4	0.18	0.16	0.08	0.09
Region					
Northeast	5,624.2	0.51	0.35	0.20	0.22
Midwest	6,433.0	0.38	0.29	0.18	0.17
South	5,385.9	0.33	0.30	0.18	0.15
West	4,221.7	0.44	0.33	0.18	0.21
Teaching level and field					
Elementary	6,500.7	0.29	0.24	0.12	0.12
Secondary					
Math/computer science	2,420.0	0.44	0.35	0.33	0.28
Science	2,925.2	0.65	0.44	0.33	0.39
Other	8,038.3	0.29	0.18	0.14	0.16
Special education	3,940.5	0.66	0.62	0.30	0.48
Private	6,839.5	0.74	0.43	0.34	0.41
Region					
Northeast	3,214.1	1.36	0.69	0.72	0.95
Midwest	3,183.3	1.27	0.55	0.81	0.56
South	4,525.0	1.81	1.15	0.55	1.24
West	2,133.7	1.75	1.38	0.86	0.81
Teaching level and field					
Elementary	4,344.4	1.19	0.74	0.50	0.63
Secondary					
Math/computer science	1,090.7	3.19	1.65	2.08	1.55
Science	1,485.6	3.25	1.94	1.98	1.22
Other	2,996.1	1.32	0.87	0.59	0.94
Special education	885.7	7.11	2.72	3.53	4.00

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88 (Teacher Questionnaires).

Table A.2—Standard errors for table 2: Number of newly hired, first-time teachers and percentage distribution of newly hired, first-time teachers by previous year's main activity, by sector and selected school and teacher characteristics: 1987–88

	Number of newly hired, first-time teachers	Main activity during 1986–87 school year (percent)					
		Working/ not teaching	Attending college/ university	Home-making	Unemployed	Retired	Military/ unknown
Total	1,729.4	1.18	1.52	0.72	0.36	—	1.25
Public	1,654.8	1.39	1.90	0.82	0.42	—	1.56
Region							
Northeast	845.6	3.31	5.44	3.38	—	0.00	4.51
Midwest	980.1	2.88	4.58	—	—	0.00	3.21
South	1,364.3	2.29	3.32	1.59	0.78	—	2.05
West	690.9	3.40	3.97	1.02	1.37	0.00	3.17
Teaching level and field							
Elementary	1,138.6	2.08	3.50	1.42	0.49	0.00	2.83
Secondary							
Math/computer science	486.8	4.29	5.80	—	2.37	0.00	3.23
Secience	379.6	5.52	5.48	—	—	0.00	3.62
Other	958.0	2.67	2.89	1.55	1.05	—	2.56
Special education	601.4	3.84	5.11	—	—	0.00	2.82
Sex							
Male	983.1	2.93	3.65	—	1.57	—	2.57
Female	1,654.1	1.58	2.37	1.07	0.36	0.00	1.83
Race–ethnicity							
Black, non-Hispanic	—	—	—	—	—	—	—
White, non-Hispanic	1,736.8	1.51	1.99	0.90	0.47	0.00	1.74
All others	398.3	6.70	6.35	0.00	0.00	0.00	2.51
Age							
Under 36 years	1,649.6	1.49	2.23	0.94	0.52	0.00	1.55
36–50 years	896.3	3.55	4.71	2.37	1.37	—	4.21
51 years or older	—	—	—	—	—	—	—
Private	879.9	2.76	3.01	1.63	0.49	—	1.79
Region							
Northeast	559.7	5.31	4.94	1.97	—	0.00	3.15
Midwest	611.4	3.65	5.89	3.55	0.00	0.00	2.94
South	431.9	7.89	8.18	5.60	—	—	4.30
West	304.4	7.42	7.77	—	—	0.00	2.88

Table A.2—Standard errors for table 2: Number of newly hired, first-time teachers and percentage distribution of newly hired, first-time teachers by previous year's main activity, by sector and selected school and teacher characteristics: 1987–88 —Continued

	Number of newly hired, first-time teachers	Main activity during 1986–87 school year (percent)					
		Working/ not teaching	Attending college/ university	Home-making	Unemployed	Retired	Military/ unknown
Teaching level and field							
Elementary	648.7	3.37	4.20	2.40	—	0.00	2.22
Secondary							
Math/computer science	—	—	—	—	—	—	—
Science	—	—	—	—	—	—	—
Other	476.0	6.99	5.71	—	—	—	3.06
Special education	—	—	—	—	—	—	—
Sex							
Male	509.3	7.51	7.05	0.00	0.00	—	3.18
Female	826.3	2.38	3.52	2.26	0.67	0.00	2.18
Race–ethnicity							
Black, non-Hispanic	—	—	—	—	—	—	—
White, non-Hispanic	929.9	2.92	3.00	1.67	0.53	0.00	1.83
All others	—	—	—	—	—	—	—
Age							
Under 36 years	816.5	3.03	3.36	1.21	—	0.00	1.94
36–50 years	257.4	10.64	7.68	11.67	—	0.00	4.06
51 years or older	—	—	—	—	—	—	—

—Too few cases for a reliable estimate.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88 (Teacher Questionnaires).

Table A.3—Standard errors for table 3: Number of newly hired, re-entrant teachers and percentage distribution of newly hired, re-entrant teachers by previous year's main activity, by sector and selected school and teacher characteristics: 1987–88

	Number of newly hired, re-entrant teachers	Main activity during 1986–87 school year (percent)					
		Working/ not teaching	Attending college/ university	Home-making	Unemployed	Retired	Military/ unknown
Total	2,334.6	1.37	1.17	1.86	0.46	1.33	1.31
Public	1,873.0	1.51	1.16	2.00	0.51	0.25	1.79
Region							
Northeast	954.6	3.47	3.61	4.21	0.00	0.00	4.50
Midwest	894.5	3.45	2.56	3.91	1.30	—	4.77
South	1,130.0	2.12	1.27	2.32	0.98	—	2.56
West	763.7	2.83	3.76	3.16	0.86	—	3.47
Teaching level and field							
Elementary	1,091.9	2.46	1.68	3.53	0.53	0.47	3.35
Secondary							
Math/computer science	390.3	7.94	5.00	4.74	—	0.00	7.61
Science	453.8	7.42	7.43	4.85	—	0.00	7.09
Other	1,129.8	3.06	1.53	2.72	0.47	—	2.76
Special education	955.1	4.60	5.25	3.59	2.50	—	4.24
Sex							
Male	842.6	3.76	1.85	—	1.54	0.79	3.65
Female	1,729.1	1.69	1.43	2.52	0.42	—	2.04
Race–ethnicity							
Black, non-Hispanic	571.8	7.81	5.09	3.23	—	0.00	6.01
White, non-Hispanic	1,681.8	1.80	1.12	2.21	0.50	0.29	2.05
All others	337.1	8.76	6.93	7.74	0.00	0.00	7.13
Age							
Under 36 years	1,226.6	2.59	2.26	3.29	1.29	0.00	2.82
36–50 years	1,337.7	2.50	1.61	2.41	0.57	0.00	2.04
51 years or older	619.4	6.97	2.34	3.94	0.00	2.62	7.71
Full-time experience							
Less than 5 years	979.9	3.02	2.90	3.01	1.00	0.00	3.26
5–14 years	1,456.3	2.23	1.75	2.95	0.89	—	2.07
15 years or more	1,245.3	3.79	1.80	2.77	0.72	0.97	3.95
Private	1,120.4	4.58	3.20	3.50	1.11	6.57	3.23
Region							
Northeast	687.2	8.38	5.95	4.90	—	—	6.52
Midwest	396.3	8.76	5.74	9.15	1.65	0.00	6.68
South	950.2	9.66	7.47	7.18	—	—	5.45
West	297.6	8.94	5.02	4.75	—	0.00	5.34

Table A.3—Standard errors for table 3: Number of newly hired, re-entrant teachers and percentage distribution of newly hired, re-entrant teachers by previous year's main activity, by sector and selected school and teacher characteristics: 1987–88—Continued

	Number of newly hired, re-entrant teachers	Main activity during 1986–87 school year (percent)					
		Working/ not teaching	Attending college/ university	Home-making	Unemployed	Retired	Military/ unknown
Teaching level and field							
Elementary	906.2	4.02	3.59	6.91	1.38	—	3.22
Secondary							
Math/computer science	—	—	—	—	—	—	—
Science	—	—	—	—	—	—	—
Other	742.5	7.93	7.44	5.14	—	3.75	8.18
Special education	—	—	—	—	—	—	—
Sex							
Male	490.9	11.92	12.63	0.00	—	—	6.43
Female	1,018.7	5.02	2.53	4.29	0.92	—	3.66
Race–ethnicity							
Black, non-Hispanic	—	—	—	—	—	—	—
White, non-Hispanic	1,144.6	4.77	3.33	3.77	1.18	6.98	3.30
All others	—	—	—	—	—	—	—
Age							
Under 36 years	570.9	6.06	6.58	4.70	0.91	0.00	4.58
36–50 years	682.7	6.02	3.29	4.38	1.85	—	4.84
51 years or older	—	—	—	—	—	—	—
Full-time experience							
Less than 5 years	548.6	6.47	4.01	5.69	—	—	3.96
5–14 years	678.0	5.38	5.28	4.39	0.85	—	4.86
15 years or more	—	—	—	—	—	—	—

—Too few cases for a reliable estimate.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88 (Teacher Questionnaires).

Table A.4—Standard errors for table 4: Number of teachers and percentage distribution of teachers by highest degree earned, by sector and teacher status: 1987–88

		Highest degree earned (percen)t					
	Number of teachers	AA/AS	BA/BS in education	BA/BS not in education	MA/MS in education	MA/MS not in education	Higher degree
Total	14,181.1	0.06	0.32	0.21	0.29	0.14	0.06
Public	13,089.1	0.04	0.32	0.22	0.31	0.13	0.05
Teacher status							
Newly hired, first-time	1,643.6	0.37	1.71	1.32	1.11	0.68	0.38
Newly hired, re-entrant	1,830.1	0.14	2.02	1.12	1.84	0.92	0.44
Continuing	12,948.8	0.04	0.34	0.22	0.31	0.14	0.05
Private	6,772.7	0.47	1.02	0.67	0.79	0.63	0.26
Teacher status							
Newly hired, first-time	883.2	1.91	3.15	2.93	1.91	2.00	1.17
Newly hired, re-entrant	1,114.9	0.61	5.64	3.90	3.85	1.93	—
Continuing	6,160.9	0.49	1.08	0.72	0.88	0.72	0.29

—Too few cases for a reliable estimate.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88 (Teacher Questionnaires).

Table A.5—Standard errors for table 5: Percentage distribution of 1987–88 teachers by 1988–89 teacher status, by sector: 1988–89

	Stayers	Movers	Leavers
Total	0.49	0.42	0.32
Public	0.50	0.45	0.33
Private	1.39	0.83	0.89

SOURCE: U.S. Department of Education, National Center for Education Statistics, Teacher Followup Survey, 1988–89.

Table A.6—Standard errors for table 6: Number of open teaching positions and percentage distribution of open positions by filled status, by selected public district and private school characteristics: 1987–88

	Number of open positions	Filled status of open positions (percent)	
		Filled positions	Unfilled positions
Total	2,651.8	0.59	0.59
Public Districts	1,889.9	0.67	0.67
Region			
Northeast	1,501.3	2.79	2.79
Midwest	849.6	1.09	1.09
South	1,279.5	0.91	0.91
West	702.7	.33	.33
Free lunch eligibility			
Less than 20%	1,596.0	1.55	1.55
20–49%	1,258.0	0.80	0.80
50% or more	728.8	0.44	0.44
Minority enrollment			
Less than 5%	1,178.2	1.50	1.50
5–19%	962.2	1.36	1.36
20–49%	1,149.6	1.19	1.19
50% or more	735.7	0.34	0.34
Private Schools	1,721.4	0.72	0.72
Region			
Northeast	1,484.6	1.58	1.58
Midwest	723.2	1.31	1.31
South	1,023.2	1.72	1.72
West	637.1	1.44	1.44
Free lunch eligibility			
Less than 20%	721.7	1.61	1.61
20–49%	579.2	1.60	1.60
50% or more	572.9	2.92	2.92
Minority enrollment			
Less than 5%	1,389.9	0.93	0.93
5–19%	1,085.5	1.19	1.19
20–49%	815.1	2.62	2.62
50% or more	1,174.1	1.59	1.59

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88 (School and Teacher Demand and Shortage Questionnaires).

Table A.7—Standard errors for table 7: Total number of students and full-time-equivalent (FTE) teachers, student/teacher ratio in 1986–87 and 1987–88, and percentage change between 1986–87 and 1987–88, by sector, region, and grade level: 1987–88

	Number				Ratio		Percent change	
	1986–87 students	1986–87 FTE teachers	1987–88 students	1987–88 FTE teachers	1986–87 students/ teacher	1987–88 students/ teacher	Change in number of students	Change in number of teachers
Total	219,565.4	12,541.6	215,313.9	12,857.2	0.03	0.03	0.05	0.06
Public Districts	184,750.6	10,329.0	181,981.7	10,317.6	0.03	0.03	0.04	0.06
Region								
Northeast	78,471.1	5,623.7	76,521.7	5,680.9	0.07	0.07	0.08	0.14
Midwest	133,822.3	7,710.5	135,191.4	7,671.1	0.07	0.06	0.06	0.12
South	86,250.2	4,597.8	86,410.6	4,841.1	0.03	0.03	0.05	0.07
West	92,164.7	4,432.5	96,209.8	4,550.4	0.07	0.07	0.11	0.13
Private Sschools	136,503.1	8,640.0	135,766.2	8,767.2	0.16	0.17	0.29	0.36
Region								
Northeast	73,940.2	4,407.4	74,821.7	4,428.3	0.35	0.36	0.62	0.80
Midwest	48,746.4	2,967.2	45,196.9	3,065.4	0.25	0.30	0.35	0.64
South	74,352.8	5,130.1	74,186.6	5,121.6	0.26	0.25	0.71	0.78
West	43,147.1	2,257.1	43,375.8	2,401.5	0.44	0.44	0.65	0.74
Grades K–6	139,260.6	7,589.1	137,207.5	7,874.2	0.04	0.04	0.09	0.11
Sector								
Public Districts	115,385.4	6,415.6	113,856.3	6,594.3	0.04	0.04	0.08	0.10
Private Schools	75,235.5	4,125.1	76,425.8	4,263.5	0.18	0.18	0.38	0.50
Grades 7–12	117,045.1	7,504.1	113,589.2	7,697.8	0.05	0.05	0.10	0.11
Sector								
Public Districts	91,506.3	5,702.6	89,672.8	5,820.6	0.04	0.04	0.10	0.10
Private Schools	93,319.5	5,962.3	90,960.4	5,863.0	0.26	0.26	0.33	0.58

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88 (Teacher Demand and Shortage Questionnaires).

Table A.8—Standard errors for table 8: Number of 1987–88 teachers and percentage distribution of 1987–88 teachers by 1988–89 teaching status and percentage distribution of those still teaching in 1988–89 by stayer/mover status, by sector and selected school and teacher characteristics: 1987–88 and 1988–89

	Number of 1987–88 teachers	1987–88 teachers		1987–88 teachers still teaching	
		Percent who left	Percent who still teach	Percent who stayed	Percent who moved
Total	51,600.8	0.32	0.32	0.44	0.44
Public	52,599.0	0.33	0.33	0.47	0.47
Region					
Northeast	24,986.7	0.78	0.78	0.84	0.84
Midwest	28,392.4	0.75	0.75	0.94	0.94
South	22,089.8	0.51	0.51	0.78	0.78
West	23,515.0	0.80	0.80	1.14	1.14
School level					
Elementary	39,034.0	0.39	0.39	0.64	0.64
Secondary	35,483.8	0.42	0.42	0.83	0.83
Combined/other	14,077.8	1.40	1.40	1.06	1.06
Community type					
Rural/farming	27,340.9	0.71	0.71	0.92	0.92
Small city	27,717.3	0.65	0.65	0.80	0.80
Suburban	26,425.6	0.6	0.60	1.01	1.01
Urban	26,649.5	0.62	0.62	0.92	0.92
Free lunch eligibility					
Less than 20%	36,165.2	0.49	0.49	0.75	0.75
20–49%	28,646.7	0.54	0.54	0.89	0.89
50% or more	24,568.0	0.72	0.72	0.89	0.89
Minority enrollment					
Less than 5%	26,034.9	0.61	0.61	0.94	0.94
5–19%	28,002.6	0.76	0.76	1.05	1.05
20–49%	24,785.4	0.63	0.63	0.89	0.89
50% or more	25,469.4	0.71	0.71	1.15	1.15
Teaching level and field					
Elementary	27,952.4	0.47	0.47	0.78	0.78
Secondary					
Math/computer science	15,647.4	0.78	0.78	1.09	1.09
Science	15,318.8	1.42	1.42	1.30	1.30
Other	34,726.8	0.58	0.58	0.73	0.73
Special education	16,303.2	0.86	0.86	1.69	1.69
Sex					
Male	34,129.6	0.49	0.49	0.85	0.85
Female	42,165.8	0.40	0.40	0.55	0.55

Table A.8—Standard errors for table 8: Number of 1987–88 teachers and percentage distribution of 1987–88 teachers by 1988–89 teaching status and percentage distribution of those still teaching in 1988–89 by stayer/mover status, by sector and selected school and teacher characteristics: 1987–88 and 1988–89—Continued

	Number of 1987–88 teachers	1987–88 teachers		1987–88 teachers still teaching	
		Percent who left	Percent who still teach	Percent who stayed	Percent who moved
Race–ethnicity					
Black, non-Hispanic	15,446.3	1.50	1.50	1.28	1.28
White, non-Hispanic	47,122.8	0.35	0.35	0.54	0.54
All others	12,504.5	0.58	0.58	1.56	1.56
Full-time experience					
Less than 5 years	14,864.3	0.82	0.82	1.06	1.06
5–14 years	34,465.1	0.58	0.58	0.72	0.72
15 years or more	31,197.4	0.47	0.47	0.80	0.80
Private	11,771.8	0.88	0.88	0.98	0.98
Region					
Northeast	7,150.3	1.47	1.47	2.29	2.29
Midwest	5,072.4	1.21	1.21	1.44	1.44
South	5,998.8	1.66	1.66	1.66	1.66
West	4,359.7	3.81	3.81	2.46	2.46
School level					
Elementary	7,588.8	0.88	0.88	1.39	1.39
Secondary	5,022.0	2.73	2.73	1.85	1.85
Combined/other	5,545.1	2.49	2.49	1.81	1.81
Community type					
Rural/farming	7,173.1	1.75	1.75	1.51	1.51
Small city	7,099.4	1.39	1.39	1.56	1.56
Suburban	5,400.5	1.83	1.83	2.69	2.69
Urban	2,926.2	5.21	5.21	6.11	6.11
Free lunch eligibility					
Less than 20%	4,387.1	1.42	1.42	1.54	1.54
20–49%	2,682.8	3.73	3.73	7.50	7.50
50% or more	2,472.9	5.81	5.81	9.02	9.02
Minority enrollment					
Less than 5%	7,199.6	1.38	1.38	1.53	1.53
5–19%	8,040.4	1.46	1.46	1.89	1.89
20–49%	3,658.1	5.68	5.68	4.29	4.29
50% or more	3,545.2	2.9	2.90	3.32	3.32

Table A.8—Standard errors for table 8: Number of 1987–88 teachers and percentage distribution of 1987–88 teachers by 1988–89 teaching status and percentage distribution of those still teaching in 1988–89 by stayer/mover status, by sector and selected school and teacher characteristics: 1987–88 and 1988–89 — Continued

	Number of 1987–88 teachers	1987–88 teachers		1987–88 teachers still teaching	
		Percent who left	Percent who still teach	Percent who stayed	Percent who moved
Level/field					
Elementary	7,371.1	0.97	0.97	1.13	1.13
Secondary					
Math/computer science	3,147.9	3.62	3.62	5.08	5.08
Science	3,242.5	2.02	2.02	3.27	3.27
Other	7,751.0	2.07	2.07	1.63	1.63
Special education	2,146.7	11.74	11.74	11.27	11.27
Sex					
Male	5,130.0	1.82	1.82	1.42	1.42
Female	9,492.0	0.94	0.94	1.06	1.06
Race–ethnicity					
Black, non-Hispanic	562.8	10.57	10.57	—	—
White, non-Hispanic	11,603.4	0.93	0.93	0.95	0.95
All others	2,298.9	4.86	4.86	2.91	2.91
Full-time experience					
Less than 5 years	5,182.9	1.62	1.62	2.08	2.08
5–14 years	5,938.5	1.62	1.62	1.46	1.46
15 years or more	6,383.2	1.21	1.21	1.67	1.67

—Too few cases for a reliable estimate.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88 (Teacher Questionnaires) and Teacher Followup Survey, 1988–89.

Table A.9—Standard errors for table 9: Number of full-time-equivalent teachers, percentage distribution of teachers by hiring status, and percentage of teachers with standard certification, by sector and selected public district and private school characteristics: 1987–88

	Number of 1987–88 teachers	Hiring status (percent)		Percent with standard certification	
		Newly hired	Continuing teachers	All teachers	Newly hired teachers
Total	12,857.2	0.07	0.07	0.17	0.40
Public Districts	10,317.6	0.04	0.04	0.12	0.23
Region					
Northeast	5,680.9	0.10	0.10	0.260	.53
Midwest	7,671.1	0.09	0.09	0.19	0.21
South	4,841.1	0.09	0.09	0.17	0.46
West	4,550.4	0.11	0.11	0.34	0.40
Free lunch eligibility					
Less than 20%	8,721.8	0.08	0.08	0.18	0.23
20–49%	11,192.4	0.08	0.08	0.19	0.50
50% or more	5,548.6	0.12	0.12	0.24	0.39
Minority enrollment					
Less than 5%	8,142.9	0.09	0.09	0.20	0.35
5–19%	8,343.6	0.10	0.10	0.30	0.20
20–49%	8,192.2	0.11	0.11	0.18	0.78
50% or more	6,312.3	0.09	0.09	0.23	0.30
Private Schools	8,767.2	0.45	0.45	0.86	1.30
Region					
Northeast	4,428.3	0.84	0.84	1.83	2.14
Midwest	3,065.4	0.59	0.59	1.51	3.02
South	5,121.6	0.90	0.90	1.53	2.56
West	2,401.5	1.00	1.00	1.98	3.04
Free lunch eligibility					
Less than 20%	3,716.4	0.68	0.68	1.54	2.54
20–49%	1,910.3	1.88	1.88	2.37	4.34
50% or more	2,028.4	2.08	2.08	3.38	5.26
Minority enrollment					
Less than 5%	5,750.8	0.75	0.75	1.12	2.04
5–19%	5,029.1	0.69	0.69	1.60	2.64
20–49%	3,725.6	0.92	0.92	2.22	2.84
50% or more	4,531.3	1.69	1.69	2.72	4.10

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88 (School and Teacher Demand and Shortage Questionnaires).

Table A.10—Standard errors for table 10: Number of full-time-equivalent public school teachers, percentage distribution of teachers by hiring status, and percentage of teachers with standard certification, by state: 1987–88

		Hiring status (percent)		Percent with standard certification	
	Number of teachers	Newly hired	Continuing teachers	All teachers	Newly hired teachers
Total	10,317.6	0.04	0.04	0.12	0.23
Alabama	1,121.2	0.19	0.19	0.68	0.60
Alaska	61.3	0.19	0.19	0.15	3.11
Arizona	1,275.6	0.73	0.73	0.21	0.14
Arkansas	1,008.5	0.72	0.72	0.23	1.08
California	3,073.3	0.18	0.18	0.55	0.68
Colorado	1,078.3	0.32	0.32	0.68	0.32
Connecticut	1,591.2	0.30	0.30	0.72	4.94
Delaware	0.0	0.00	0.00	0.00	0.00
Dist. of Columbia	0.0	0.00	0.00	0.00	0.00
Florida	1,254.2	0.10	0.10	0.58	0.49
Georgia	2,030.3	0.31	0.31	1.14	0.81
Hawaii	0.0	0.00	0.00	0.00	0.00
Idaho	257.0	0.45	0.45	0.41	.28
Illinois	1,840.4	0.21	0.21	0.18	0.27
Indiana	1,672.8	0.19	0.19	1.08	0.44
Iowa	1,364.9	0.38	0.38	0.47	2.17
Kansas	798.0	0.34	0.34	1.14	0.36
Kentucky	1,398.3	0.31	0.31	0.15	0.30
Louisiana	838.2	0.15	0.15	0.89	1.02
Maine	806.1	0.68	0.68	0.50	2.14
Maryland	43.1	0.04	0.04	0.03	0.21
Massachusetts	2,419.2	0.30	0.30	0.64	0.87
Michigan	2,105.5	0.23	0.23	0.38	0.39
Minnesota	1,481.1	0.51	0.51	0.85	0.43
Mississippi	1,002.4	0.35	0.35	1.26	0.51
Missouri	1,397.8	0.32	0.32	0.12	0.50
Montana	590.2	0.92	0.92	1.21	0.94
Nebraska	766.4	0.71	0.71	0.24	0.31
Nevada	0.0	0.00	0.00	0.00	0.00
New Hampshire	450.9	0.99	0.99	0.43	1.68
New Jersey	3,265.1	0.35	0.35	0.46	0.38
New Mexico	482.0	0.28	0.28	0.15	1.75
New York	3,652.4	0.23	0.23	0.57	0.51
North Carolina	1,284.1	0.18	0.18	0.63	0.37
North Dakota	302.7	0.47	0.47	0.35	0.31
Ohio	4,000.6	0.17	0.17	0.72	0.24
Oklahoma	2,021.3	0.42	0.42	0.46	1.58
Oregon	809.0	0.43	0.43	1.38	0.80
Pennsylvania	2,595.6	0.19	0.19	0.57	0.82
Rhode Island	185.4	0.15	0.15	0.05	—
South Carolina	1,226.9	0.25	0.25	0.77	0.65
South Dakota	325.2	0.53	0.53	0.27	0.24
Tennessee	1,396.0	0.34	0.34	0.35	0.99
Texas	3,100.3	0.26	0.26	0.42	1.41

Table A.10—Standard errors for table 10: Number of full-time-equivalent public school teachers, percentage distribution of teachers by hiring status, and percentage of teachers with standard certification, by state: 1987–88— Continued

		Hiring status (percent)		Percent with standard certification	
	Number of teachers	Newly hired	Continuing teachers	All teachers	Newly hired teachers
Utah	272.1	0.19	0.19	1.09	0.39
Vermont	311.8	0.69	0.69	1.17	1.67
Virginia	1,315.6	0.18	0.18	0.97	0.63
Washington	1,803.3	0.30	0.30	0.99	1.35
West Virginia	0.0	0.00	0.00	0.00	0.00
Wisconsin	1,554.8	0.25	0.25	0.23	1.58
Wyoming	208.4	0.30	0.30	0.05	0.03

—Too few cases for a reliable estimate.
NOTE: Standard errors for Delaware, the District of Columbia, Hawaii, Nevada, and West Virginia are 0 because all school districts in these jurisdictions were included in the sample.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88 (School and Teacher Demand and Shortage Questionnaires).

Table A.11—Standard errors for table 11: Percentage of public school teachers certified in their main and other assignment fields and percentage distribution of certified teachers by type of certification, by teaching level and field and by state: 1987–88

	Certified in main field	Type of certification			Certified another field	Type of certification		
		Standard	Probationary	Temporary		Standard	Probationary	Temporary
Total	0.09	0.26	0.11	0.21	0.62	0.45	0.33	0.37
Teaching level and field								
Elementary	0.17	0.41	0.18	0.33	1.27	1.36	0.81	1.08
Secondary								
Math/computer science	0.61	0.61	0.39	0.50	1.63	1.67	0.92	1.22
Science	0.48	0.50	0.44	0.41	1.18	0.92	0.73	0.66
Other	0.16	0.28	0.21	0.20	0.83	0.52	0.40	0.43
Special education	0.32	0.77	0.44	0.67	1.79	1.73	0.99	1.58
State								
Alabama	0.34	0.89	0.56	0.74	3.51	2.11	—	—
Alaska	1.83	0.90	0.00	—	5.45	0.00	0.00	0.00
Arizona	0.99	1.42	0.82	1.22	4.85	4.02	2.95	2.88
Arkansas	0.48	1.18	0.53	0.99	3.71	1.37	0.00	1.37
California	0.37	0.76	0.57	0.56	1.88	1.56	0.67	1.45
Colorado	0.70	1.02	0.81	0.64	4.20	3.22	—	2.73
Connecticut	0.69	2.03	1.18	1.71	4.10	4.30	4.03	2.66
Delaware	1.02	1.79	1.24	1.29	5.43	6.90	—	—
District of Columbia	2.54	3.73	3.91	1.59	—	—	—	—
Florida	0.80	1.22	0.78	1.11	3.51	3.65	1.29	3.05
Georgia	0.38	1.27	0.86	1.05	3.49	3.35	2.00	2.75
Hawaii	1.43	2.09	2.04	1.30	6.41	—	—	—
Idaho	0.32	1.07	—	1.12	3.59	1.90	—	1.70
Illinois	0.41	1.28	0.39	1.23	3.33	1.92	—	1.92
Indiana	0.29	0.78	0.43	0.69	3.22	2.39	1.29	2.25
Iowa	0.35	1.25	0.56	1.02	3.76	1.80	—	1.11
Kansas	0.43	0.62	—	0.61	3.54	1.87	—	1.71
Kentucky	0.35	1.75	0.64	1.68	3.97	2.84	0.00	2.84
Louisiana	1.29	1.34	0.82	1.15	4.15	4.08	—	3.83
Maine	0.85	2.09	1.41	1.77	4.05	4.72	—	3.53
Maryland	0.90	1.92	1.24	1.23	6.40	3.65	—	0.00
Massachusetts	0.71	0.99	—	0.94	3.21	2.28	—	1.54
Michigan	0.55	1.07	0.68	0.86	2.05	2.17	1.02	2.10
Minnesota	0.38	1.46	0.89	0.97	3.82	2.51	2.43	—
Mississippi	0.33	1.00	0.54	0.94	4.40	3.14	—	2.48
Missouri	0.45	0.78	0.25	0.74	4.17	3.01	1.19	2.68
Montana	0.44	1.32	1.15	0.90	3.84	2.88	2.78	—
Nebraska	0.54	1.45	1.47	0.53	2.92	2.77	—	—
Nevada	0.81	1.56	0.94	1.25	5.70	1.56	—	0.00
New Hampshire	0.99	1.76	1.20	1.17	5.43	0.00	0.00	0.00
New Jersey	0.57	0.51	0.00	0.51	4.10	1.50	0.00	1.50
New Mexico	0.59	1.35	—	1.29	3.02	2.44	0.00	2.44
New York	0.56	1.21	0.85	1.02	3.05	3.12	2.52	2.54
North Carolina	0.53	1.51	1.23	0.79	4.05	4.04	2.73	4.00
North Dakota	0.35	0.78	0.69	0.41	3.27	1.33	—	—
Ohio	0.35	1.00	0.36	1.00	3.06	1.62	1.52	1.86

Table A.11—Standard errors for table 11: Percentage of public school teachers certified in their main and other assignment fields and percentage distribution of certified teachers by type of certification, by teaching level and field and by state: 1987–88—Continued

	Certified in main field	Type of certification			Certified another field	Type of certification		
		Standard	Probationary	Temporary		Standard	Probationary	Temporary
Oklahoma	0.58	0.76	0.33	0.71	2.97	2.12	1.64	1.14
Oregon	0.65	1.38	1.04	1.29	4.03	3.71	3.37	—
Pennsylvania	0.30	0.86	0.51	0.72	2.99	3.18	1.70	2.35
Rhode Island	1.10	1.44	1.06	1.28	4.03	7.17	5.03	3.61
South Carolina	0.79	0.99	—	0.98	4.57	4.71	—	3.39
South Dakota	0.39	0.87	0.73	0.53	4.39	2.71	—	0.00
Tennessee	0.67	1.78	1.19	1.18	3.61	5.31	5.30	—
Texas	0.48	0.86	0.37	0.65	1.82	1.60	0.96	1.29
Utah	0.70	1.36	0.91	1.14	4.86	4.00	3.05	2.95
Vermont	0.27	2.14	2.12	0.61	4.96	—	—	—
Virginia	0.80	1.51	0.91	0.98	4.13	2.91	2.88	1.06
Washington	0.52	1.26	1.00	1.05	4.01	2.64	2.49	1.53
West Virginia	0.42	1.34	0.93	0.98	3.18	2.16	1.49	1.61
Wisconsin	0.24	1.23	0.52	1.14	4.01	2.02	—	1.81
Wyoming	0.49	1.14	0.66	1.00	4.15	2.86	—	2.27

—Too few cases for a reliable estimate.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88 (Teacher Questionnaires).

Table A.12—Standard errors for table 12: Attrition rate: percentage of teachers who left teaching (leavers) by sex, age, years of teaching experience, by sector and selected school and teacher characteristics: 1987–88 and 1988–89

	Sex		Age			Years teaching experience		
	Female	Male	Less than 36	36–50	51 or more	Less than 11	11–25	26 or more
Total	0.38	0.48	0.71	0.32	1.11	0.64	0.42	1.52
Public	0.40	0.49	0.72	0.30	1.22	0.72	0.43	1.68
Region								
Northeast	0.93	1.32	2.14	0.32	3.12	1.76	0.36	5.04
Midwest	1.00	0.69	1.40	0.32	2.53	1.20	1.08	1.74
South	0.55	1.16	1.19	0.69	2.21	1.19	0.54	2.79
West	1.18	0.69	1.68	1.11	1.66	0.66	1.50	2.82
School level								
Elementary	0.46	0.51	0.83	0.50	1.80	0.88	0.69	2.29
Secondary	0.59	0.63	1.26	0.43	1.14	1.08	0.47	1.72
Combined/other	2.22	1.57	1.34	1.04	13.12	1.64	2.77	10.47
Community type								
Rural/farming	0.88	0.72	1.61	0.65	1.34	1.42	1.14	1.70
Small city	0.94	0.61	1.22	1.06	1.28	1.74	0.82	2.16
Suburban	0.74	1.12	1.27	0.37	2.26	1.08	0.64	4.49
Urban	0.76	0.79	1.16	0.39	3.49	0.92	0.94	5.86
Free lunch eligibility								
Less than 20%	0.75	0.50	1.30	0.63	0.97	1.35	0.52	1.61
20–49%	0.64	0.90	0.88	0.50	2.19	0.74	0.65	3.87
50% or more	0.83	1.78	1.36	0.51	3.79	1.13	1.28	2.58
Minority enrollment								
Less than 5%	0.73	0.68	1.20	0.33	2.44	1.03	0.75	1.62
5–19%	1.21	0.76	1.85	1.09	1.52	1.82	0.84	4.00
20–49%	0.71	1.40	1.25	0.69	2.95	0.92	0.83	5.20
50% or more	0.83	1.15	1.74	0.49	1.79	1.25	1.19	1.98
Teaching level and field								
Elementary	0.56	0.66	1.25	0.55	1.92	1.19	0.74	2.24
Secondary								
Math/computer science	0.84	1.29	1.32	0.77	4.51	1.78	0.68	—
Science	2.69	1.22	1.82	2.32	6.75	1.54	2.32	—
Other	0.79	0.79	1.57	0.41	2.13	1.38	0.48	2.65
Special education	0.99	1.60	1.02	1.38	6.41	1.09	1.91	—
Sex								
Male	(*)	0.49	1.21	0.34	2.08	1.06	0.32	2.80
Female	0.40	(*)	0.85	0.46	1.59	0.82	0.59	1.98

Table A.12—Standard errors for table 12: Attrition rate: percentage of teachers who left teaching (leavers) by sex, age, years of teaching experience, by sector and selected school and teacher characteristics: 1987–88 and 1988–89—Continued

	Sex		Age			Years teaching experience		
	Female	Male	Less than 36	36–50	51 or more	Less than 11	11–25	26 or more
Race–ethnicity								
Black, non-Hispanic	1.73	1.50	1.47	0.28	6.20	1.33	2.10	5.51
White, non-Hispanic	0.42	0.57	0.86	0.35	1.37	0.86	0.46	1.86
All others	0.77	1.06	1.05	0.63	1.87	1.05	0.80	—
Private	0.94	1.82	1.55	1.38	2.56	1.24	1.46	2.49
Region								
Northeast	1.87	2.66	2.06	3.07	2.93	2.17	2.14	3.36
Midwest	1.45	2.05	3.04	1.16	3.07	2.24	1.13	1.61
South	1.83	2.68	2.37	2.86	6.22	1.83	3.28	—
West	4.89	7.26	6.07	4.87	—	4.73	4.93	—
School level								
Elementary	0.82	6.45	1.55	1.64	2.41	1.39	1.44	2.97
Secondary	3.94	1.64	5.40	3.04	—	4.92	3.37	—
Combined/other	3.08	2.17	2.97	4.20	12.38	2.53	5.46	—
Community type								
Rural/farming	1.97	3.74	2.65	2.62	3.96	2.08	2.98	—
Small city	1.64	2.16	2.64	1.83	5.01	1.82	2.33	—
Suburban	2.10	2.42	3.78	2.49	3.06	2.84	3.49	—
Urban	6.29	9.47	5.97	11.01	—	6.90	7.37	—
Free lunch eligible								
Less than 20%	1.70	5.11	3.37	0.86	6.21	2.33	1.73	—
20–49%	3.86	—	4.69	7.85	—	7.76	—	—
50% or more	2.9	—	2.28	—	—	11.51	—	—
Minority enrollment								
Less than 5%	1.70	1.42	2.48	1.94	3.06	1.75	2.84	3.77
5–19%	1.52	3.72	2.61	2.04	3.06	1.91	3.19	—
20–49%	6.72	3.34	7.84	11.31	—	6.73	9.79	—
50% or more	1.72	14.48	2.41	7.59	—	4.30	4.21	—
Teaching level and field								
Elementary	0.95	8.30	1.68	1.39	3.14	1.44	1.47	2.83
Secondary								
Math/computer science	3.18	8.14	5.67	—	—	5.30	—	—
Science	2.46	3.29	2.40	3.93	—	2.74	—	—
Other	2.92	1.46	4.03	2.35	4.61	2.95	3.17	—
Special education	12.04	—	3.38	—	—	12.62	—	—

Table A.12—Standard errors for table 12: Attrition rate: percentage of teachers who left teaching (leavers) by sex, age, years of teaching experience, sector, and selected school and teacher characteristics: 1987–88 and 1988–89—Continued

	Sex		Age			Years teaching experience		
	Female	Male	Less than 36	36–50	51 or more	Less than 11	11–25	26 or more
Sex								
Male	(*)	1.82	2.34	3.21	6.09	2.96	1.89	—
Female	0.94	(*)	1.88	1.43	2.68	1.53	1.76	2.04
Race–ethnicity								
Black, non-Hispanic	9.93	—	—	—	—	10.60	—	—
White, non-Hispanic	1.01	1.41	1.67	1.31	2.16	1.33	1.51	1.84
All others	5.27	—	9.42	—	—	7.16	—	—

—Too few cases for a reliable estimate.
(*) Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88 (Teacher Questionnaires) and Teacher Followup Survey, 1988–89.

Table A.13—Standard errors for table 13: Percentage distribution of teachers by age, by sector and selected school and teacher characteristics: 1987–88

	Percent in age group									
	< 26	26–30	31–35	36–40	41–45	46–50	51–55	56–60	61–65	66+
Total	0.12	0.19	0.19	0.21	0.22	0.19	0.17	0.13	0.08	0.04
Public	0.13	0.22	0.21	0.22	0.23	0.20	0.18	0.13	0.09	0.04
Region										
Northeast	0.27	0.55	0.47	0.80	0.60	0.45	0.43	0.34	0.22	0.08
Midwest	0.25	0.35	0.42	0.45	0.41	0.42	0.27	0.30	0.17	0.08
South	0.26	0.39	0.39	0.43	0.39	0.35	0.27	0.24	0.14	0.05
West	0.30	0.45	0.53	0.55	0.40	0.42	0.40	0.32	0.20	0.10
School level										
Elementary	0.21	0.33	0.32	0.33	0.35	0.31	0.29	0.18	0.14	0.06
Secondary	0.18	0.24	0.32	0.38	0.32	0.30	0.26	0.21	0.08	0.04
Combined/other	0.39	0.73	0.68	0.81	0.87	0.78	0.71	0.36	0.26	0.09
Community type										
Rural/farming	0.27	0.32	0.45	0.49	0.51	0.42	0.34	0.32	0.16	0.08
Small city	0.30	0.41	0.52	0.66	0.55	0.50	0.46	0.31	0.17	0.09
Suburban	0.29	0.38	0.45	0.44	0.43	0.43	0.39	0.26	0.19	0.06
Urban	0.32	0.39	0.44	0.53	0.48	0.30	0.30	0.20	0.17	0.06
Free lunch eligibility										
Less than 20%	0.20	0.26	0.36	0.45	0.44	0.28	0.33	0.23	0.10	0.04
20–49%	0.25	0.30	0.45	0.47	0.39	0.34	0.27	0.22	0.17	0.06
50% or more	0.34	0.50	0.54	0.69	0.57	0.50	0.40	0.32	0.20	0.13
Minority enrollment										
Less than 5%	0.21	0.41	0.45	0.46	0.44	0.35	0.31	0.21	0.14	0.06
5–19%	0.30	0.35	0.47	0.45	0.52	0.40	0.36	0.29	0.18	0.05
20–49%	0.35	0.45	0.47	0.53	0.53	0.51	0.41	0.34	0.16	0.07
50% or more	0.39	0.46	0.47	0.64	0.57	0.44	0.37	0.32	0.21	0.13

Table A.13—Standard errors for table 13: Percentage distribution of teachers by age, by sector and selected school and teacher characteristics: 1987–88—Continued

	Percent in age group									
	< 26	26–30	31–35	36–40	41–45	46–50	51–55	56–60	61–65	66+
Teaching level and field										
Elementary	0.22	0.32	0.33	0.38	0.43	0.39	0.29	0.25	0.19	0.07
Secondary										
Math/computer science	0.60	0.63	0.73	0.91	0.84	0.67	0.72	0.47	0.25	0.10
Science	0.42	0.72	0.73	0.76	0.80	0.80	0.69	0.45	0.24	0.06
Other	0.17	0.25	0.33	0.44	0.47	0.34	0.29	0.26	0.10	0.05
Special education	0.56	0.60	0.90	0.74	0.64	0.52	0.47	0.37	0.23	0.11
Sex										
Male	0.17	0.30	0.36	0.38	0.45	0.35	0.28	0.30	0.12	0.06
Female	0.16	0.29	0.27	0.29	0.32	0.25	0.22	0.17	0.13	0.05
Race–ethnicity										
Black, non-Hispanic	0.38	0.61	0.86	0.89	0.74	0.75	0.54	0.57	0.33	0.19
White, non-Hispanic	0.15	0.25	0.23	0.25	0.23	0.21	0.18	0.14	0.09	0.03
All others	0.48	0.84	1.02	1.10	1.13	0.84	0.74	0.86	0.46	0.35
Private	0.50	0.78	0.77	0.70	0.76	0.65	0.48	0.47	0.28	0.19
Region										
Northeast	0.85	1.41	1.21	1.00	1.38	1.05	0.99	0.79	0.89	0.48
Midwest	1.03	1.11	1.06	1.28	0.94	1.08	0.94	0.86	0.48	0.42
South	0.91	1.30	1.95	1.52	1.51	1.28	0.74	1.38	0.60	0.29
West	1.16	1.86	1.63	1.63	1.71	1.28	1.11	0.92	0.43	0.14
School level										
Elementary	0.67	0.92	1.08	0.99	0.70	0.73	0.69	0.47	0.31	0.35
Secondary	0.92	2.05	1.79	2.06	1.81	1.63	1.20	0.82	1.00	0.73
Combined/other	1.12	1.20	1.57	1.56	1.55	1.20	0.79	1.45	0.58	0.21

Table A.13—Standard errors for table 13: Percentage distribution of teachers by age, by sector and selected school and teacher characteristics: 1987–88—Continued

	Percent in age group									
	< 26	26–30	31–35	36–40	41–45	46–50	51–55	56–60	61–65	66+
Community type										
Rural/farming	0.77	1.23	1.52	1.32	0.99	0.86	0.84	0.53	0.41	0.33
Small city	1.12	1.86	1.35	1.52	1.25	1.35	0.84	0.72	0.76	0.45
Suburban	1.28	1.25	1.23	1.55	1.47	1.17	1.41	0.85	0.74	0.66
Urban	2.49	1.20	1.69	2.02	2.44	1.71	1.11	3.48	0.87	0.33
Free lunch eligibility										
Less than 20%	1.08	1.20	1.43	1.55	1.41	1.01	1.30	0.71	0.78	0.41
20–49%	2.39	2.18	3.41	2.65	1.86	1.93	2.56	1.02	1.49	1.13
50% or more	2.84	3.10	3.50	2.28	3.61	2.17	2.72	1.32	0.81	0.93
Minority enrollment										
Less than 5%	0.93	0.83	1.42	1.09	1.06	0.94	0.79	0.48	0.35	0.34
5–19%	0.81	1.59	1.12	1.64	1.16	1.11	0.87	0.86	0.61	0.33
20–49%	1.38	1.58	2.38	1.85	2.20	1.74	1.35	3.08	1.38	0.48
50% or more	1.55	1.83	2.04	2.12	2.47	1.88	1.34	0.75	0.84	0.37
Teaching level and field										
Elementary	0.81	0.88	0.74	0.92	0.89	0.68	0.55	0.69	0.28	0.27
Secondary										
Math/comp. science	2.65	2.09	1.88	2.67	2.07	2.58	1.79	1.83	1.40	0.00
Science	1.78	2.61	2.36	3.07	2.88	2.49	1.81	—	2.05	0.00
Other	0.89	1.50	1.60	1.66	1.59	1.25	1.02	0.72	0.74	0.35
Special education	3.89	3.60	3.56	3.58	3.28	2.06	4.14	1.24	1.62	—
Sex										
Male	0.97	1.55	1.38	1.82	1.66	1.14	1.14	0.78	0.78	0.26
Female	0.62	0.81	0.85	0.78	0.86	0.66	0.47	0.57	0.32	0.21

Table A.13—Standard errors for table 13: Percentage distribution of teachers by age, by sector and selected school and teacher characteristics: 1987–88—Continued

	Percent in age group									
	< 26	26–30	31–35	36–40	41–45	46–50	51–55	56–60	61–65	66+
Race–ethnicity										
Black, non-Hispanic	3.67	3.38	4.10	4.92	3.73	2.45	2.35	0.66	2.99	—
White, non-Hispanic	0.53	0.80	0.82	0.72	0.80	0.69	0.49	0.50	0.31	0.18
All others	2.40	3.91	3.76	4.40	2.27	4.63	2.26	1.33	2.28	0.60

—Too few cases for a reliable estimate.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987-88 (Teacher Questionnaires).

Table A.14—Standard errors for table 14: Percentage distribution of leavers by main reasons for leaving, by sector, by selected school and teacher characteristics: 1987–88 and 1988–89

	Public					Private				
	Career	Family/ health	Child-rearing	Retire-ment	Invol-untary	Career	Family/ health	Child-rearing	Retire-ment	Invol-untary
Total	2.73	2.17	3.30	2.80	0.59	3.34	3.81	4.37	1.63	1.44
Region										
Northeast	5.83	3.68	4.68	8.82	2.59	8.62	5.03	11.74	2.46	2.69
Midwest	6.70	6.00	3.63	5.43	1.02	4.42	6.45	8.05	2.58	3.31
South	5.80	2.47	6.47	3.26	0.86	5.93	8.05	3.07	5.08	2.78
West	7.28	7.49	4.03	4.70	1.56	9.88	7.09	14.03	—	2.14
Community type										
Rural/farming	6.40	2.47	6.98	4.73	1.17	7.09	6.38	8.02	0.98	2.46
Small city	7.74	3.44	9.24	2.91	2.08	6.63	9.19	5.80	7.74	3.21
Suburban	5.93	6.41	3.25	6.00	1.19	7.84	6.19	9.24	1.38	1.47
Urban	3.17	5.49	2.42	6.02	1.17	7.81	13.17	16.93	4.75	3.51
School level										
Elementary	4.00	2.99	5.38	4.20	0.47	4.60	5.21	6.50	1.89	2.23
Secondary	4.68	4.51	1.49	2.78	1.63	11.71	3.97	13.60	1.43	3.09
Combined/other	12.31	9.30	5.33	13.39	2.56	4.48	9.47	9.45	4.74	1.99
Teaching level and field										
Elementary	4.19	3.34	6.74	5.39	0.43	3.85	3.76	6.01	1.68	2.25
Secondary										
Math/computer science	5.29	3.58	1.85	3.74	1.89	9.89	10.58	3.39	7.91	—
Science	10.33	5.25	2.29	4.76	3.03	—	—	—	—	—
Other	5.21	4.51	4.35	4.93	1.25	6.65	7.07	7.56	3.50	1.94
Special education	7.42	2.97	5.53	9.09	3.05	—	—	—	—	—
Sex										
Male	4.67	2.36	0.00	5.13	1.16	8.45	5.26	11.88	3.88	4.92
Female	3.29	2.85	4.32	3.63	0.60	3.32	4.45	4.85	1.78	1.34

Table A.14—Standard errors for table 14: Percentage distribution of leavers by main reasons for leaving, by sector, by selected school and teacher characteristics: 1987–88 and 1988–89—Continued

	Public					Private				
	Career	Family/ health	Child-rearing	Retire-ment	Invol-untary	Career	Family/ health	Child-rearing	Retire-ment	Invol-untary
Race–ethnicity										
Black, non-Hispanic	20.89	6.20	—	14.20	3.37	—	—	—	—	—
White, non-Hispanic	3.09	2.38	3.75	3.00	0.63	3.50	4.31	4.61	1.70	1.53
All others	8.35	5.17	10.51	5.62	2.65	—	—	—	—	—
Full-time										
Less than 5 years	5.11	3.68	4.21	—	1.83	5.35	3.99	3.40	0.00	2.07
5–14 years	5.79	5.07	7.40	3.01	1.00	5.27	6.39	7.81	—	1.52
15 years or more	5.41	1.18	0.69	5.21	0.67	7.79	5.34	—	7.66	5.17

—Too few cases for a reliable estimate.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88 (Teacher Questionnaires) and Teacher Followup Survey, 1988–89.

Table A.15—Standard errors for table 15: Number of teachers, percentage distribution of teachers by highest degree earned, and percentage of teachers certified in main assignment field, by sector, 1988–89 teaching status, and reason for leaving: 1987–88 and 1988–89

	Number of 1987–88 teachers	Degree (percent)						Percent certified in main assignment field
		AA/AS	BA/BS in education	BA/BS not in education	MA/MS in education	MA/MS not in education	Higher degree	
Total	50,868.7	0.22	1.09	0.77	1.16	0.53	0.60	0.41
Public	51,608.2	0.21	1.22	0.82	1.33	0.56	0.63	0.38
1988–89 status								
Still teaching	51,385.2	0.22	1.30	0.85	1.41	0.59	0.65	0.39
Not teaching	6,844.4	0.11	3.29	1.74	2.91	1.90	0.83	0.59
Reason for leaving								
Career	3,605.5	—	5.30	1.77	5.17	1.31	1.44	0.72
Family/health	2,662.7	0.42	6.50	8.30	7.95	2.09	2.38	0.88
Childrearing	4,110.8	—	6.75	2.72	4.76	2.11	1.17	2.60
Retirement	3,592.2	0.16	6.10	1.83	5.69	6.15	1.53	0.90
Involuntarily	555.8	—	5.57	3.61	5.30	1.73	4.02	3.07
Private	11,852.8	0.75	2.42	1.89	2.54	1.15	1.18	1.92
1988–89 status								
Still teaching	11,495.3	0.72	2.68	2.04	2.72	1.28	1.26	2.07
Not teaching	2,170.7	2.14	4.06	2.85	4.22	1.59	1.71	3.49
Reason for leaving								
Career	1,024.9	2.58	3.74	5.06	6.30	2.61	2.30	5.59
Family/health	1,177.6	6.34	6.48	3.14	3.24	2.89	1.95	6.89
Childrearing	1,537.2	0.00	13.95	7.77	13.46	—	0.00	11.38
Retirement	—	—	—	—	—	—	—	—
Involuntarily	391.8	0.00	7.02	10.26	7.81	9.20	--	11.59

—Too few cases for a reliable estimate.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88 (Teacher Questionnaires) and Teacher Followup Survey, 1988–89.

Table A.16—Standard errors for table 16: Number of voluntary, nonretiring leavers, percentage of voluntary, nonretiring leavers who planned to return, and percentage distribution of those who planned to return by when they planned to return, by sector and selected teacher characteristics: 1987–88 and 1988–89

	Number of voluntary nonretiring leavers	Percent who planned to return to teaching	When they planned to return			
			By next year	Within 5 years	In more than 5 years	Undecided
Total	6,519.9	3.07	4.52	4.13	2.07	0.92
Public	6,202.7	3.97	5.77	5.45	1.61	1.03
Teaching level and field						
Elementary	4,317.1	7.06	6.53	4.45	2.87	1.44
Secondary						
Math/computer science	622.1	6.13	—	—	—	—
Science	1,523.5	12.14	—	—	—	—
Other	3,605.5	7.60	15.34	16.06	1.79	2.71
Special education	1,718.3	9.19	11.39	11.20	4.44	--
Sex						
Male	2,133.0	3.31	9.36	9.91	3.04	2.12
Female	5,696.4	4.96	6.29	5.91	1.90	1.06
Race–ethnicity						
Black, non-Hispanic	2,248.8	13.47	—	—	—	—
White, non-Hispanic	5,312.3	4.56	6.11	5.72	1.55	1.06
All others	339.4	10.70	—	—	—	—
Full-time experience						
Less than 5 years	2,592.1	5.29	5.73	5.46	2.33	1.50
5–14 years	4,759.1	7.07	9.58	8.57	2.16	1.46
15 years or more	3,139.1	4.23	7.78	7.48	—	3.65
Private	2,149.1	4.58	8.02	5.40	5.82	2.14
Teaching level and field						
Elementary	1,161.8	6.09	9.46	6.08	8.19	2.08
Secondary						
Math/computer science	—	—	—	—	—	—
Science	—	—	—	—	—	—
Other	1,616.0	6.22	12.24	11.36	5.66	6.11
Special education	—	—	—	—	—	—
Sex						
Male	870.1	11.06	—	—	—	—
Female	2,147.3	5.01	7.51	4.84	6.92	2.46
Race–ethnicity						
Black, non-Hispanic	—	—	—	—	—	—
White, non-Hispanic	2,194.6	5.06	7.89	5.08	6.72	2.26
All others	—	—	—	—	—	—

Table A.16—Standard errors for table 16: Number of voluntary, nonretiring leavers, percentage of voluntary, nonretiring leavers who planned to return, and percentage distribution of those who planned to return by when they planned to return, by sector and selected teacher characteristics: 1987–88 and 1988–89—Continued

	Number of voluntary nonretiring leavers	Percent who planned to return to teaching	When they planned to return			
			By next year	Within 5 years	In more than 5 years	Undecided
Full-time experience						
Less than 5 years	905.2	3.86	7.46	5.70	5.38	3.22
5–14 years	1,883.0	7.90	13.02	9.57	8.19	—
15 years or more	583.3	7.15	—	—	—	—

—Too few cases for a reliable estimate.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88 (Teacher Questionnaires) and Teacher Followup Survey, 1988–89.

Table A.17—Standard errors for table 17: Percentage distribution of voluntary, nonretiring 1987–88 leavers by 1988–89 occupational status, and percentage distribution of those in noneducation jobs by type of job, by sector and selected teacher characteristics: 1987–88 and 1988–89

	1988–89 Occupational status					Noneducation job				
	Attending college/ university	Home-making	Nonteaching job in education	Non-education job	Other	Prof./ technical	Manage-ment	Service/ sales	Clerical	Other
Total	0.83	3.29	2.61	2.04	2.35	2.04	3.79	3.37	4.83	2.81
Public	1.01	4.41	3.45	2.54	2.84	3.58	5.94	5.07	10.45	4.71
Teaching level and field										
Elementary	1.78	7.78	5.50	2.23	4.96	—	—	—	—	—
Secondary										
Math/computer science	3.00	3.31	6.64	6.02	4.29	—	—	—	—	—
Science	5.68	6.16	20.92	13.76	2.97	—	—	—	—	—
Other	1.93	7.46	7.25	5.47	3.36	5.08	10.71	5.22	20.26	6.80
Special education	4.13	8.38	8.95	5.28	11.30	—	—	—	—	—
Sex										
Male	1.95	—	4.88	5.98	4.01	5.99	7.49	8.62	17.46	7.04
Female	1.14	5.30	4.08	2.19	3.41	4.19	7.91	4.56	6.58	6.29
Race–ethnicity										
Black, non-Hispanic	5.45	4.48	20.72	8.34	8.44	—	—	—	—	—
White, non-Hispanic	1.09	4.93	3.62	2.71	3.08	3.87	6.27	4.15	11.29	5.21
All others	3.43	11.37	8.86	4.53	3.57	—	—	—	—	—
Full-time experience										
Less than 5 years	2.46	5.28	3.30	5.04	3.38	7.13	8.70	10.61	19.96	6.47
5–14 years	1.68	7.59	4.01	3.14	4.95	6.11	8.01	7.06	—	6.60
15 years or more	1.35	2.74	10.18	3.43	5.81	7.66	8.99	10.06	4.88	13.81
Private	1.52	4.33	1.99	4.10	3.75	2.44	5.02	4.35	8.29	3.84

Table A.17—Standard errors for table 17: Percentage distribution of voluntary, nonretiring 1987–88 leavers by 1988–89 occupational status, and percentage distribution of those in noneducation jobs by type of job, by sector and selected teacher characteristics: 1987–88 and 1988–89 —Continued

	1988–89 Occupational status					Noneducation job				
	Attending college/ university	Home-making	Nonteaching job in education	Non-education job	Other	Prof./ technical	Manage-ment	Service/ sales	Clerical	Other
Teaching level and field										
Elementary	1.68	6.86	2.44	5.02	2.42	—	9.45	10.11	8.15	5.39
Secondary										
Math/computer science	—	—	—	—	—	—	—	—	—	—
Science	—	—	—	—	—	—	—	—	—	—
Other	3.18	7.89	3.30	7.08	2.34	3.37	6.38	1.81	10.24	6.78
Special education	—	—	—	—	—	—	—	—	—	—
Sex										
Male	4.92	14.41	5.21	12.03	3.11	—	—	—	—	—
Female	1.66	4.84	2.26	4.21	4.32	2.19	5.27	4.57	8.33	1.88
Race–ethnicity										
Black, non-Hispanic	—	—	—	—	—	—	—	—	—	—
White, non-Hispanic	1.35	4.68	1.91	4.56	4.22	1.92	5.38	4.63	8.77	4.10
All others	—	—	—	—	—	—	—	—	—	—
Full-time experience										
Less than 5 years	4.03	4.06	2.89	4.20	2.58	2.31	9.56	6.81	9.31	10.30
5–14 years	0.53	7.37	0.71	7.34	6.08	3.71	5.94	5.92	10.99	2.99
15 years or more	0.99	—	9.37	8.60	6.52	—	—	—	—	—

—Too few cases for a reliable estimate.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–88 (Teacher Questionnaires) and Teacher Followup Survey, 1988–89.

Appendix B

Technical Notes

SASS Sample Selection[1]

Selection of Schools

The public school sample of 9,317 schools was selected from the Quality of Education Data (QED) file of public schools. All public schools in the file were stratified first by state (50 states and the District of Columbia) and then by three grade levels (elementary, secondary, and combined elementary and secondary). Within each stratum, the schools were sorted by urbanicity, percent minority (four categories), zip code (first three digits), highest grade in the school, enrollment, and PIN number (assigned by QED). For each stratum within each state, sample schools were selected by systematic (interval) sampling with probability proportional to the square root of the number of teachers within a school.

The private school sample of 3,513 schools was selected primarily from the QED file of private schools. Because this list of private schools did not fully cover all private schools in the country, two additional steps were taken to improve coverage. The first step was to update the QED file with current lists of schools from 17 private school associations. All private schools obtained in this way and the private schools on the QED list were stratified by state and within state by grade level and affiliation group. Sampling within each stratum was done as it was for public schools.

The second step taken to improve private school coverage was to select an area frame of schools contained in 75 Primary Sampling Units (PSUs) selected from the universe of 2,497 PSUs with probability proportional to the square root of the PSU population. The PSUs, each of which consisted of a county or group of counties, were stratified by Census geographic region (Northeast, Midwest, South, and West), Metropolitan Statistical Area (MSA) status (MSA or non-MSA), and private school enrollment (two groups). Within each of the 75 PSUs, a telephone search was conducted to find all in-scope private schools. Sources included yellow pages, religious institutions (except for Roman Catholic religious institutions, because each Catholic diocese is contacted annually when the QED list is updated), local education agencies, chambers of commerce, local government offices, commercial milk companies, and commercial real estate offices. All schools not on the QED file or the lists from private school associations were eligible to be selected for the area sample. Most of these schools were selected with certainty, but when sampling was done, schools were sampled with probability proportional to the square root of the number of teachers (for schools that could be contacted) or a systematic equal probability procedure (for schools that could not be contacted).

The private school sample was designed to allow detailed comparisons among the following affiliations: Catholic, Friends, Episcopal, Jewish, Lutheran, Seventh Day Adventist, Christian Schools International, American Association of Christian Schools, Exceptional Children, Military Schools, Montessori, and Independent Schools. At least 100 schools were selected from each affiliation, or all schools in the affiliation if there were fewer than 100 schools.

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[1] For a detailed description of the sample design see Steven Kaufman, *1988 Schools and Staffing Survey Sample Design and Estimation*, Technical Report, U.S. Department of Education, National Center for Education Statistics, May 1991, 23-43.

Selection of LEAs

All local education agencies (LEAs) that had at least one school selected for the school sample were included in the LEA sample for the Teacher Demand and Shortage Survey. In addition, a sample of 70 LEAs that did not contain eligible schools was selected directly. Only 8 of these 70 were actually in scope (that is, reported hiring teachers). The total LEA sample was 5,592.

Selection of Teachers

All 56,242 public and 11,529 private school teachers in the teacher samples were selected from the public and private school samples. The specified average teacher sample size was four, eight, and six teachers for public elementary, secondary, and combined schools, respectively and four, five, and three teachers for private elementary, secondary, and combined schools, respectively

A list that included all full- and part-time teachers, itinerant teachers, and long-term substitutes was obtained from each sample school. Within each school, teachers were stratified by experience into two groups: new teachers and all others. New teachers were those who, counting 1987–88, were in their first, second, or third year of teaching. New teachers in private schools were oversampled by 60 percent; oversampling in public schools was not necessary. Within each new and experienced teacher stratum, elementary teachers were sorted into general elementary, special education, and "other" categories; and secondary teachers were sorted into mathematics, science, English, social science, vocational education, and "other" categories. Within each school and teacher stratum, teachers were selected systematically with equal probability.

In order to obtain more reliable estimates of bilingual–ESL teachers, both the public and private school teacher samples included a bilingual–ESL (English as a second language) supplement that included teachers who used a native language other than English to instruct students with limited-English proficiency and teachers who provided intensive instruction in English to students with limited-English proficiency.[2] The bilingual–ESL supplement of 2,447 teachers was selected independently from the basic sample. It was designed to provide estimates for California, Texas, Florida, Illinois, New York, and for all other states combined. The sample size within each school was chosen to be proportional to the weighted number of bilingual-ESL teachers in the school. Within a school containing bilingual–ESL teachers, the teachers were selected systematically with equal probability.[3]

Selection of Teachers for the Teacher Followup Survey

The 1988–89 occupational status of teachers responding to the 1987–88 SASS was determined by contacting their schools to determine whether they were still at the school, had left to teach elsewhere, or had left for a nonteaching job. All leavers were included in the sample. Continuing teachers were sorted by Census region, by urbanicity, teacher subject, and school enrollment within each public stratum. Within each private stratum, continuing teachers were sorted by affiliation, urbanicity, teacher subject, and school enrollment. After the teachers were sorted, teachers were selected within each stratum using a probability proportional to size procedure. The measure of size was the SASS basic weight (inverse of the probability of selecting a teacher in the SASS teacher sample). This sample allocation method yielded a total sample size of 7,172 teachers, of whom 2,987 were leavers and 4,185 were stayers or movers.

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[2] The supplement was funded by the Department of Education's Office of Bilingual Education and Minority Language Affairs (OBEMLA).

[3] Bilingual-ESL teachers selected in both the basic and supplement samples were unduplicated so that each teacher appears only once in the combined sample of bilingual–ESL and all other teachers.

Data Collection Procedures

The data were collected for the National Center for Education Statistics (NCES) by the U.S. Bureau of the Census. Questionnaires were mailed to school districts, schools, administrators, and teachers in January and February 1988.[4] Six weeks later, a second questionnaire was sent to each nonrespondent. A telephone followup of nonrespondents was conducted during April, May, and June. Because of the large number of nonresponding teachers and the need to complete the survey before the end of the school year, the telephone followup was conducted for only a subsample of teachers. The weights for this subsample were adjusted to reflect the subsampling.

The Teacher Followup Survey was conducted in two phases. First, in October 1988 schools were contacted to determine the status of all teachers in the 1987–88 SASS. Principals were asked to indicate whether the teacher was still at the school in a teaching or nonteaching capacity or had left the school to teach elsewhere or for a nonteaching job. In March 1989, the questionnaire for former teachers was sent to the 2,987 persons who had left the teaching profession, and the questionnaire for current teachers was sent to a sample of 4,185 persons reported as still teaching. If this questionnaire was not returned within 4 to 5 weeks, a second questionnaire was sent. Finally, if neither questionnaire elicited a response, a telephone call was made in May.

Weighting[5]

Weights of the sample units were developed to produce national and state estimates for public schools, teachers, administrators, and LEAs. The private sector data were weighted to produce national and affiliation group estimates. The affiliation groups for private schools were Catholic, other religious, and nonsectarian. The basic weights were the inverse of the probability of selection and were adjusted for nonresponse.

Standard Errors

The estimates in these tables are based on samples and are subject to sampling variability. Standard errors were estimated using a balanced repeated replications procedure that incorporates the design features of this complex sample survey. The standard errors indicate the accuracy of each estimate. If all possible samples of the same size were surveyed under the same conditions, an interval of 1.96 standard errors below to 1.96 standard errors above a particular statistic would include the universe value in approximately 95 percent of the cases. Note, however, that the standard errors do not take into account the effects of biases due to item nonresponse, measurement error, data processing error, or other possible systematic error.

Accuracy of Estimates

The statistics in this report are population estimates derived from the samples described in the preceding section. Consequently, they are subject to sampling variability. In addition, they are subject to nonsampling errors, which can arise because of nonresponse, errors in reporting, or errors in data collection. These types of errors can bias the estimates and are not easy to measure. They can occur because respondents interpret questions differently, remember things incorrectly, or misrecord their responses. Nonsampling errors can also be due to incorrect editing, coding, preparing, or entering of the data or to differences related to the time the survey was conducted.

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[4] Copies of the questionnaires may be obtained by writing to the Special Surveys and Analysis Branch of NCES.

[5] For a detailed description of the weighting processes see Kaufman, *op. cit.*, 47-57.

The precision with which one can use survey results to make inferences to a population depends upon the magnitude of both sampling and nonsampling errors. In large sample surveys, such as the SASS, sampling errors are generally minimal, except when estimates are made for relatively small subpopulations (Native Americans, for example).

When a table contains cells with dashes that indicate "too few cases for a reliable estimate," it means that there were fewer than 30 cases on which to base the estimate or that the cell had to be suppressed for confidentiality purposes.

Response Rates and Imputation

Most item-level missing data on the district and school files were imputed using a sequential hot deck procedure that matched the nonrespondent district or school with the most similar respondent in the same stratum. "Most similar" was determined on the basis of metropolitan status, percent minority, and enrollment. On the public school file, all missing items were imputed. On the private school file, items 7 and 35 were not imputed. On both the public and private teacher demand and shortage file, items 3, 11, 12, 13, and 28 were not imputed.

No imputation was done for either the teacher or administrator files or for the teacher followup. Item nonresponse was treated as missing data in the computation of estimates for tables that include data from either of these files. This is equivalent to assuming equal distributions for both respondents and nonrespondents. Not imputing for item nonresponse when averages are estimated results in bias, and the nature of this bias is unknown.

The weighted response rates for the each of the surveys were as follows:

Survey	Public	Private
Teacher demand and shortage	90.8	66.0
Administrator	94.4	79.3
School	91.9	78.6
Teacher	86.4	79.1
Teacher followup[6]	84.1	75.9

The response rates for the items used from the teacher and teacher followup files are listed below. They do not reflect additional response loss due to complete questionnaire refusal. Tables in this report are based on the cases that responded to the items tabulated.

[6]The effective response rate shown here is the product of the response rates to the Teacher Survey, which were 86.4 percent (public) and 79.1 percent (private), and the Followup Survey, which were 97.3 percent (public) and 96.0 percent (private).

Table number	Variable name	Response rate (percent)	
		Public	Private
Tables 1,2,3	Year began teaching	99.5	98.5
	Activity 1986–87	99.3	99.5
Table 4,16	Highest degree earned	100.0	100.0
Table 5,8	Teaching status: stayers, movers	99.9*	
	Teaching status: leavers	100.0*	
Table 12	Type of certification in main field	82.1	87.1
	Type of certification in other field	77.8	84.0
Table 13	Teacher sex	99.6	99.9
	Years of teaching experience	100.0	100.0
Table 13, 14	Year of birth	98.9	98.2
Table 15,17,18	Main reason for leaving teaching	99.4*	
Table 16	Certification in main field	99.0	99.4
Table 17	Plans to return to teaching (leavers)	99.4*	
	When might return to teaching (leavers)	98.6*	
Table 18	Occupational status	98.3*	
	Type of job	81.7*	
Row variables			
	Teaching level	98.8	98.8
	Teaching field	100.0	100.0
	Race	98.3	98.3
	Hispanic origin	97.9	97.8

*Applies to public and private school teachers.

Variable Definitions

Public and Private Schools

A public school was defined as an institution that provides educational services, has one or more teachers, is located in one or more buildings, receives public funds as primary support, and is operated by an education agency. Prison schools and schools operated by the U.S. Department

of Defense and the Bureau of Indian Affairs were included. A private school was defined as a school not in the public system that provides instruction for any of grades 1–12 where the instruction was not given exclusively in a private home.

To be included in SASS, a school was required to have a minimum school day of 4 hours and a minimum school year of 160 days, and it had to provide instruction to students at or above the first-grade level and not be in a private home. (If it could not be determined that instruction was not in a private home, the school had to have at least 10 students or more than one teacher.) In addition, the school could not offer only adult, night, or specialized courses.

Community Type

Respondents to the School Questionnaire were asked to identify the community type that best described their school's location. They were given ten choices, which were aggregated into four categories as follows:

Rural/farming	A rural or farming community or an Indian reservation.
Small city	A small city or town of fewer than 50,000 people that was not a suburb of a larger city.
Suburban	A suburb of a medium-sized, large, or very large city, or a military base or station.
Urban	A medium-sized city (50,000 to 100,000 people), large city (100,000 to 500,000 people), or very large city (more than 500,000 people).

School Level

Elementary	A school that had grade 6 or lower, or "ungraded," and no grade higher than the 8th.
Secondary	A school that had no grade lower than the 7th, or "ungraded," and some grade between 7th and 14th.
Combined	A school that had grades higher than the 8th and lower than the 7th.

Minority Enrollment

Less than 5%, etc.	Categories were based on the percentage of the students who were American Indian or Alaskan Native; Asian or Pacific Islander; Hispanic, regardless of race (Mexican, Puerto Rican, Cuban, Central or South American, or other culture or origin); Black (not of Hispanic origin).

Public School District

A public school district (or LEA) was defined as a government agency administratively responsible for providing public elementary and/or secondary instruction and educational support services. The agency or administrative unit had to operate under a public board of education. Districts that operated only one school and districts that did not operate schools but did hire

teachers were included. A district was considered out of scope if it did not employ elementary or secondary teachers.

Region

Northeast	Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania
Midwest	Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas
South	Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, Texas
West	Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, California, Alaska, Hawaii

Teacher

For the purposes of SASS, a teacher was any full- or part-time teacher whose primary assignment was to teach in any of grades K–12. Itinerant teachers and long-term substitutes who were filling the role of a regular teacher on an indefinite basis were also included. An itinerant teacher was defined as a teacher who taught at more than one school.

Teachers were classified as elementary or secondary on the basis of the grades they taught rather than the schools in which they taught. An elementary school teacher was one who, when asked for the grades taught, checked:

- Only "ungraded" and was designated as an elementary teacher on the list of teachers provided by the school; or
- 6th grade or lower, or "ungraded" and no grade higher than 6th; or
- 6th grade or lower and 7th grade or higher, and reported a primary assignment of prekindergarten, kindergarten, or general elementary; or
- 7th and 8th grades only, and a reported primary assignment of prekindergarten, kindergarten, or general elementary; or
- 6th grade or lower and 7th grade or higher, and reported a primary assignment of special education and was designated as an elementary teacher on the list of teachers provided by the school; or
- 7th and 8th grades only, and reported a primary assignment of special education and was designated as an elementary teacher on the list of teachers provided by the school.

A secondary school teacher was one who, when asked for the grades taught, checked:

- "Ungraded" and was designated as a secondary teacher on the list of teachers provided by the school; or

- 6th grade or lower and 7th grade or higher, and reported a primary assignment other than prekindergarten, kindergarten, or general elementary; or
- 9th grade or higher, or 9th grade or higher and "ungraded"; or
- 7th and 8th grades only, and reported a primary assignment other than prekindergarten, kindergarten, general elementary, or special education; or
- 7th and 8th grades only, and reported a primary assignment of special education and was designated as a secondary teacher on the list of teachers provided by the school; or
- 6th grade or lower and 7th grade or higher, or 7th and 8th grades only, and were not categorized above as either elementary or secondary.

Comments and More Information

We are interested in your reaction to the information and analysis presented here and to the content of the questions used to produce these results. We welcome your recommendations for improving our survey work. If you have suggestions or comments, if you want more information about this report, or if you are interested in replicating these numbers, please contact:

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